# PART A

# IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

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PART A

NATIONAL BUREAU OF STANDARDS
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## CONTENTS

# SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numerical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with CRPL-F188, Part A, issued April 1960, the count is given for foF2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

To indicate further in a general manner the relative reliability of the data, for the F2 layer, h'F or foEs, if the count is from five to nine, or, for all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is enclosed in parentheses. Medians are computed for less than five values for foF2 only.

Ordinarily, a blank space in the fEs or foEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F2 or h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

There is no indication on the graphs of the relative reliability of the observed data; it is necessary to consult the tables for such information. Beginning with this issue, medians of data will be published as received from the originating organization. The accuracy of the data is the responsibility of the laboratory making the observations.

The tables may contain median values of either foEs or fEs. The graph of median Es corresponds to the table. Percentage curves of fEs are estimated from values of foEs when necessary.

The latest available information follows concerning the smoothed observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1960.

Smoothed Observed Sunspot Number

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1954 | | | | 3 | 4 | 4 | 5 | 7 | 8 | 8 | 9 | 12 |
| 1955 | 14 | 16 | 19 | 23 | 29 | 35 | 40 | 46 | 55 | 64 | 73 | 81 |
| 1956 | 89 | 98 | 109 | 119 | 127 | 137 | 146 | 150 | 151 | 156 | 160 | 164 |
| 1957 | 170 | 172 | 174 | 181 | 186 | 188 | 191 | 194 | 197 | 200 | 201 | 200 |
| 1958 | 199 | 201 | 201 | 197 | 191 | 187 | 185 | 185 | 184 | 182 | 181 | 180 |
| 1959 | 179 | 177 | 174 | 169 | 165 | 161 | 156 | 151 | 146 | 141 | 137 | 132 |
| 1960 | 129 | 125 | 122 | 120 | 117 | 114 | 108 | 102 | 97 | 93 | 87 | 83 |
| 1961 | 79 | 74 | 68 | 63 | 59 | 54 | 52 | | | | | |
| 1962 | | | | | | | | | | | | |

# WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 142 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
- Brisbane, Australia
- Canberra, Australia
- Hobart, Tasmania

Australian Department of National Development Bureau of Mineral Resources, Geology and Geophysics:
- Mundaring, Western Australia

University of Graz:
- Graz, Austria

Belgian Royal Meteorological Institute:
- Dourbes, Belgium

Universidad Mayor de San Andres:
- La Paz, Bolivia

British Department of Scientific and Industrial Research, Radio Research Board:
- Falkland Is.
- Inverness, Scotland
- Singapore, British Malaya

Defence Research Board, Canada:
- Churchill, Canada
- Ottawa, Canada
- Resolute Bay, Canada
- St. John's, Newfoundland
- Winnipeg, Canada

Universidad de Concepcion:
- Concepcion, Chile

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
- Formosa, China

Czechoslovak Academy of Sciences:
Pruhonice, Czechoslovakia

Danish National Committee of URSI:
Godhavn, Greenland
Narssarssuaq, Greenland

General Direction of Posts and Telegraphs, Helsinki, Finland:
Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

Ionospheric Institute, Breisach, Germany:
Freiburg, Germany

The Royal Netherlands Meteorological Institute:
De Bilt, Holland

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Indian Council of Scientific and Industrial Research, Radio Research Committee, New Delhi, India:
Ahmedabad (Physical Research Laboratory)
Bombay (All India Radio)
Delhi (All India Radio)
Kodaikanal (India Meteorological Department)
Tiruchy (All India Radio)
Trivandrum (All India Radio)

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
Akita, Japan
Tokyo (Kokubunji), Japan
Wakkanai, Japan
Yamagawa, Japan

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
Christchurch, New Zealand

Manila Observatory:
Baguio, P. I.

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Lycksele, Sweden
Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

United States Army Signal Corps:
- Adak, Alaska
- Grand Bahama I.
- Thule, Greenland
- White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
- Anchorage, Alaska
- Boulder, Colorado
- Byrd Station, Antarctica
- Fairbanks (College), Alaska (Geophysical Institute of the University of Alaska)
- Maui, Hawaii
- Point Barrow, Alaska

## TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by several stations associated with CRPL. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed by Dr. H. H. Howe for a CDC-1604 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

| Quantity | Units | Remarks |
|---|---|---|
| Electron Density (N) | $x10^3$ = electrons/$cm^3$ | Body of table; given at each 10 km of height. |
| NMAX | $x10^3$ = electrons/$cm^3$ | Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level). |
| QUALification | (Alphabetic) | A standard scaling letter qualifying the observation when necessary. |
| KP | | The standard Kp magnetic index, to one digit. |
| HMIN | Kilometers | The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve. |
| SCAT | Kilometers | One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX. |
| HMAX | Kilometers | The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile. |
| SHMAX | $x10^{10}$ = electrons/$cm^2$ column. | Obtained by integration of the profile between the limits HMIN and HMAX. |

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is 4* or less. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, and the mean value of Kp are given for each hour.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region.* Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright, J. W. "A Model of the F-Region Above HMAX F2" J Geophys Res. V 65 pp 185-191

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 1 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O,KP | F8 | F8 | A7 | A7 | F7 | 88 | 88 | 88 | 5 | G5 | A5 | A2 |
| HMIN | | | 190 | 394 | | | 100 | 111 | 108 | 108 | | |
| SCAT | | | 28.0 | 36.6 | | | 49.9 | 23.1 | 67.7 | 42.4 | | |
| HMAXF | | | 238 | 468 | | | 285 | 233 | 300 | 187 | | |
| SHMAX | | | 84 | 42 | | | 101 | 162 | 331 | 112 | | |
| KM | | | | | | | | | | | | |
| 470 | | | | 82.7 | | | | | | | | |
| 460 | | | | 81.8 | | | | | | | | |
| 450 | | | | 77.0 | | | | | | | | |
| 440 | | | | 70.9 | | | | | | | | |
| 430 | | | | 62.5 | | | | | | | | |
| 420 | | | | 51.3 | | | | | | | | |
| 410 | | | | 36.4 | | | | | | | | |
| 400 | | | | 20.6 | | | | | | | | |
| 310 | | | | | | | | | 271 | | | |
| 300 | | | | | | | | | 271 | | | |
| 290 | | | | | | | 103 | | 270 | | | |
| 280 | | | | | | | 103 | | 265 | | | |
| 270 | | | | | | | 101 | | 258 | | | |
| 260 | | | | | | | 96.6 | | 245 | | | |
| 250 | | | | | | | 90.2 | | 232 | | | |
| 240 | | | 236 | | | | 82.5 | 426 | 221 | | | |
| 230 | | | 231 | | | | 74.1 | 424 | 211 | | | |
| 220 | | | 210 | | | | 65.6 | 392 | 201 | | | |
| 210 | | | 176 | | | | 57.5 | 289 | 191 | | | |
| 200 | | | 128 | | | | 50.5 | 127 | 180 | | | |
| 190 | | | 12.4 | | | | 44.5 | 86.1 | 166 | 184 | | |
| 180 | | | | | | | 39.1 | 69.6 | 147 | 183 | | |
| 170 | | | | | | | 34.7 | 59.0 | 122 | 177 | | |
| 160 | | | | | | | 31.2 | 55.5 | 97.9 | 165 | | |
| 150 | | | | | | | 28.5 | 53.4 | 87.2 | 150 | | |
| 140 | | | | | | | 26.6 | 51.4 | 81.1 | 134 | | |
| 130 | | | | | | | 25.5 | 47.7 | 77.6 | 118 | | |
| 120 | | | | | | | 24.8 | 39.4 | 75.5 | 109 | | |
| 110 | | | | | | | 22.5 | | 56.2 | 68.9 | | |
| 100 | | | | | | | 12.4 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 1 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O,KP | A2 | G2 | A2 | 2 | 2 | A2 | A2 | A2 | 1 | 1 | 1 | 1 |
| HMIN | | 110 | 108 | 108 | 108 | | | | 251 | 228 | 287 | 268 |
| SCAT | | 30.1 | 104 | 63.0 | 59.5 | | | | 53.6 | 46.1 | 46.7 | 41.2 |
| HMAXF | | 174 | 293 | 260 | 270 | | | | 355 | 338 | 385 | 359 |
| SHMAX | | 109 | 410 | 314 | 311 | | | | 126 | 115 | 96 | 94 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | | | | | 149 | |
| 380 | | | | | | | | | | | 149 | |
| 370 | | | | | | | | | | | 145 | |
| 360 | | | | | | | | | 183 | | 138 | 163 |
| 350 | | | | | | | | | 183 | | 128 | 161 |
| 340 | | | | | | | | | 180 | 167 | 115 | 154 |
| 330 | | | | | | | | | 174 | 165 | 99.0 | 142 |
| 320 | | | | | | | | | 164 | 160 | 80.3 | 126 |
| 310 | | | | | | | | | 151 | 151 | 59.4 | 104 |
| 300 | | | 283 | | | | | | 133 | 138 | 38.4 | 80.8 |
| 290 | | | 283 | | | | | | 110 | 124 | 16.2 | 57.1 |
| 280 | | | 282 | | | | | | 83.6 | 107 | | 34.6 |
| 270 | | | 279 | 284 | 288 | | | | 54.4 | 89.0 | | 12.4 |
| 260 | | | 276 | 284 | 286 | | | | 28.6 | 70.0 | | |
| 250 | | | 271 | 282 | 280 | | | | | 49.7 | | |
| 240 | | | 264 | 277 | 271 | | | | | 31.4 | | |
| 230 | | | 254 | 268 | 256 | | | | | 12.4 | | |
| 220 | | | 245 | 253 | 239 | | | | | | | |
| 210 | | | 237 | 238 | 222 | | | | | | | |
| 200 | | | 233 | 226 | 209 | | | | | | | |
| 190 | | | 229 | 219 | 198 | | | | | | | |
| 180 | | 229 | 224 | 211 | 186 | | | | | | | |
| 170 | | 228 | 217 | 202 | 172 | | | | | | | |
| 160 | | 217 | 205 | 189 | 152 | | | | | | | |
| 150 | | 194 | 181 | 170 | 130 | | | | | | | |
| 140 | | 171 | 157 | 147 | 115 | | | | | | | |
| 130 | | 153 | 142 | 132 | 106 | | | | | | | |
| 120 | | 142 | 137 | 126 | 101 | | | | | | | |
| 110 | | 12.4 | 42.4 | 53.8 | 59.0 | | | | | | | |

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ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 2 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A1 | 1 | A1 | A1 | 1 | 1 | S1 | 1 | A2 | A2 | A2 | A3 |
| HMIN | 275 | 252 | 240 | 218 | 219 | 275 | | 110 | 107 | | | |
| SCAT | 35.0 | 40.5 | 40.4 | 47.1 | 50.4 | 62.1 | | 30.1 | 35.1 | | | |
| HMAXF | 355 | 338 | 318 | 313 | 318 | 385 | | 238 | 235 | | | |
| SHMAX | 75 | 90 | 82 | 83 | 71 | 72 | | 149 | 248 | | | |
| KM | | | | | | | | | | | | |
| 390 | | | | | | 94.1 | | | | | | |
| 380 | | | | | | 93.9 | | | | | | |
| 370 | | | | | | 92.8 | | | | | | |
| 360 | 151 | | | | | 90.4 | | | | | | |
| 350 | 151 | | | | | 86.8 | | | | | | |
| 340 | 145 | 163 | | | | 81.9 | | | | | | |
| 330 | 132 | 162 | | | | 75.6 | | | | | | |
| 320 | 115 | 155 | 155 | 129 | 103 | 66.8 | | | | | | |
| 310 | 90.7 | 143 | 153 | 128 | 102 | 55.1 | | | | | | |
| 300 | 63.8 | 127 | 147 | 126 | 99.7 | 42.0 | | | | | | |
| 290 | 39.1 | 104 | 137 | 121 | 94.9 | 29.2 | | | | | | |
| 280 | 20.1 | 79.3 | 120 | 112 | 88.0 | 16.4 | | | | | | |
| 270 | | 50.8 | 98.8 | 101 | 79.7 | | | | | | | |
| 260 | | 26.2 | 69.9 | 88.5 | 70.2 | | | | | | | |
| 250 | | | 38.4 | 72.8 | 58.6 | | | | | | | |
| 240 | | | 3.9 | 53.7 | 44.7 | | | 264 | 363 | | | |
| 230 | | | | 33.4 | 28.8 | | | 259 | 361 | | | |
| 220 | | | | 12.4 | 7.4 | | | 240 | 347 | | | |
| 210 | | | | | | | | 206 | 317 | | | |
| 200 | | | | | | | | 160 | 280 | | | |
| 190 | | | | | | | | 114 | 240 | | | |
| 180 | | | | | | | | 76.8 | 203 | | | |
| 170 | | | | | | | | 64.5 | 170 | | | |
| 160 | | | | | | | | 59.8 | 141 | | | |
| 150 | | | | | | | | 57.0 | 117 | | | |
| 140 | | | | | | | | 55.4 | 101 | | | |
| 130 | | | | | | | | 53.6 | 92.9 | | | |
| 120 | | | | | | | | 46.3 | 85.5 | | | |
| 110 | | | | | | | | 13.0 | 54.3 | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 2 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O,KP | A3 | 3 | 2 | 2 | 2 | A0 | A0 | A0 | A1 | A1 | A1 | A0 |
| HMIN | | 108 | 108 | 107 | 108 | 108 | | 211 | 199 | | 290 | 263 |
| SCAT | | 44.0 | 40.5 | 29.4 | 38.8 | 34.7 | | 37.1 | 53.8 | | 46.4 | 42.1 |
| HMAXF | | 259 | 276 | 256 | 252 | 252 | | 283 | 336 | | 393 | 357 |
| SHMAX | | 565 | 692 | 646 | 502 | 405 | | 180 | 194 | | 148 | 135 |
| KM | | | | | | | | | | | | |
| 400 | | | | | | | | | | | 235 | |
| 390 | | | | | | | | | | | 235 | |
| 380 | | | | | | | | | | | 230 | |
| 370 | | | | | | | | | | | 220 | |
| 360 | | | | | | | | | | | 204 | 234 |
| 350 | | | | | | | | | | | 182 | 232 |
| 340 | | | | | | | | | 232 | | 154 | 224 |
| 330 | | | | | | | | | 231 | | 121 | 209 |
| 320 | | | | | | | | | 227 | | 84.2 | 188 |
| 310 | | | | | | | | | 218 | | 52.8 | 159 |
| 300 | | | | | | | | | 205 | | 29.2 | 124 |
| 290 | | | | | | | | 389 | 190 | | .4 | 86.3 |
| 280 | | | 850 | | | | | 388 | 172 | | | 50.5 |
| 270 | | | 846 | | | | | 376 | 153 | | | 24.4 |
| 260 | | 681 | 818 | 1080 | 744 | 660 | | 351 | 132 | | | |
| 250 | | 674 | 764 | 1069 | 743 | 659 | | 307 | 112 | | | |
| 240 | | 650 | 683 | 1001 | 725 | 641 | | 238 | 93.4 | | | |
| 230 | | 607 | 589 | 869 | 682 | 592 | | 140 | 75.6 | | | |
| 220 | | 547 | 490 | 696 | 613 | 521 | | 56.1 | 58.0 | | | |
| 210 | | 470 | 409 | 525 | 510 | 425 | | | 40.4 | | | |
| 200 | | 399 | 355 | 394 | 404 | 318 | | | 12.4 | | | |
| 190 | | 345 | 321 | 318 | 316 | 237 | | | | | | |
| 180 | | 311 | 296 | 277 | 253 | 187 | | | | | | |
| 170 | | 289 | 276 | 251 | 216 | 153 | | | | | | |
| 160 | | 265 | 251 | 232 | 186 | 128 | | | | | | |
| 150 | | 234 | 219 | 208 | 159 | 109 | | | | | | |
| 140 | | 197 | 181 | 177 | 136 | 94.7 | | | | | | |
| 130 | | 169 | 158 | 145 | 121 | 84.8 | | | | | | |
| 120 | | 157 | 146 | 132 | 114 | 79.6 | | | | | | |
| 110 | | 81.7 | 49.3 | 70.8 | 40.6 | 37.7 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 3 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A0 | 0 | 1 | 1 | 1 | 1 | S1 | A1 | A2 | 2 | 2 | 2 |
| HMIN | 217 | 239 | 224 | 226 | 238 | 299 | 218 | 107 | | 104 | 108 | 108 |
| SCAT | 40.6 | 27.4 | 33.5 | 41.6 | 55.8 | 40.6 | 38.0 | 38.3 | | 38.4 | 40.8 | 46.5 |
| HMAXF | 323 | 303 | 293 | 301 | 341 | 373 | 295 | 238 | | 255 | 264 | 289 |
| SHMAX | 132 | 86 | 93 | 78 | 88 | 61 | 71 | 226 | | 476 | 631 | 942 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | 118 | | | | | | |
| 370 | | | | | | 118 | | | | | | |
| 360 | | | | | | 116 | | | | | | |
| 350 | | | | | 123 | 109 | | | | | | |
| 340 | | | | | 123 | 99.4 | | | | | | |
| 330 | 224 | | | | 122 | 83.5 | | | | | | |
| 320 | 223 | | | | 119 | 63.8 | | | | | | |
| 310 | 217 | 217 | | 146 | 114 | 40.8 | | | | | | |
| 300 | 206 | 217 | 209 | 146 | 107 | 12.4 | 142 | | | | | |
| 290 | 185 | 204 | 208 | 144 | 97.1 | | 142 | | | | | 1121 |
| 280 | 156 | 178 | 201 | 137 | 84.4 | | 137 | | | | | 1111 |
| 270 | 123 | 143 | 184 | 126 | 68.8 | | 127 | | | | 819 | 1075 |
| 260 | 92.3 | 98.8 | 157 | 111 | 50.0 | | 112 | | | 645 | 817 | 1012 |
| 250 | 65.0 | 47.2 | 119 | 88.7 | 31.4 | | 87.0 | | | 642 | 796 | 926 |
| 240 | 44.2 | 12.4 | 70.5 | 62.6 | 12.4 | | 58.2 | 383 | | 621 | 749 | 812 |
| 230 | 28.2 | | 29.5 | 27.8 | | | 33.5 | 379 | | 579 | 678 | 686 |
| 220 | 12.4 | | | | | | 12.4 | 362 | | 511 | 582 | 564 |
| 210 | | | | | | | | 332 | | 434 | 475 | 453 |
| 200 | | | | | | | | 283 | | 357 | 389 | 376 |
| 190 | | | | | | | | 216 | | 301 | 333 | 329 |
| 180 | | | | | | | | 148 | | 261 | 297 | 301 |
| 170 | | | | | | | | 102 | | 230 | 271 | 283 |
| 160 | | | | | | | | 76.8 | | 204 | 246 | 263 |
| 150 | | | | | | | | 61.8 | | 179 | 220 | 236 |
| 140 | | | | | | | | 55.9 | | 148 | 188 | 204 |
| 130 | | | | | | | | 53.4 | | 114 | 168 | 173 |
| 120 | | | | | | | | 52.1 | | 107 | 146 | 158 |
| 110 | | | | | | | | 30.3 | | 103 | 49.3 | 39.5 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 3 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | A2 | 2 | S2 | A2 | 1 | S1 | 1 | 1 | 1 | 1 | 1 |
| HMIN | 109 | | 106 | 109 | 105 | 109 | 100 | 199 | 206 | 235 | 253 | 249 |
| SCAT | 48.3 | | 45.0 | 44.3 | 46.4 | 46.7 | 29.9 | 43.1 | 49.2 | 43.4 | 37.4 | 42.2 |
| HMAXF | 292 | | 302 | 287 | 278 | 292 | 261 | 298 | 319 | 333 | 351 | 348 |
| SHMAX | 919 | | 1233 | 1137 | 892 | 765 | 412 | 286 | 250 | 179 | 149 | 163 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | | | 261 | |
| 350 | | | | | | | | | | | 261 | 269 |
| 340 | | | | | | | | | | 297 | 256 | 266 |
| 330 | | | | | | | | | | 297 | 240 | 256 |
| 320 | | | | | | | | | 373 | 290 | 219 | 238 |
| 310 | | | 1547 | | | | | | 370 | 276 | 191 | 214 |
| 300 | 1080 | | 1546 | | | 1008 | | 471 | 359 | 254 | 159 | 184 |
| 290 | 1079 | | 1521 | 1561 | | 1008 | | 468 | 340 | 223 | 124 | 149 |
| 280 | 1062 | | 1457 | 1553 | 1184 | 992 | | 452 | 315 | 186 | 85.8 | 111 |
| 270 | 1022 | | 1360 | 1507 | 1175 | 954 | 838 | 422 | 278 | 146 | 49.0 | 73.5 |
| 260 | 960 | | 1212 | 1419 | 1139 | 894 | 838 | 382 | 232 | 97.2 | 24.9 | 40.4 |
| 250 | 870 | | 1030 | 1296 | 1075 | 805 | 812 | 330 | 185 | 51.5 | | 12.4 |
| 240 | 760 | | 838 | 1121 | 983 | 651 | 735 | 271 | 135 | 21.4 | | |
| 230 | 641 | | 656 | 910 | 862 | 568 | 627 | 207 | 84.2 | | | |
| 220 | 515 | | 503 | 686 | 714 | 458 | 482 | 133 | 45.3 | | | |
| 210 | 413 | | 402 | 503 | 553 | 368 | 324 | 65.6 | 18.8 | | | |
| 200 | 351 | | 346 | 382 | 415 | 298 | 187 | 12.4 | | | | |
| 190 | 314 | | 314 | 313 | 318 | 244 | 110 | | | | | |
| 180 | 291 | | 294 | 277 | 259 | 203 | 74.0 | | | | | |
| 170 | 268 | | 275 | 253 | 223 | 169 | 57.5 | | | | | |
| 160 | 240 | | 254 | 231 | 199 | 141 | 47.7 | | | | | |
| 150 | 201 | | 227 | 206 | 175 | 117 | 41.8 | | | | | |
| 140 | 176 | | 195 | 175 | 149 | 98.9 | 39.0 | | | | | |
| 130 | 168 | | 173 | 151 | 127 | 86.3 | 37.5 | | | | | |
| 120 | 134 | | 156 | 130 | 116 | 77.8 | 35.5 | | | | | |
| 110 | 23.8 | | 123 | 24.2 | 55.4 | 24.2 | 32.1 | | | | | |
| 100 | | | | | | | 19.7 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 4 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 0 | 0 | 0 | 1 | S1 | 1 | 3 | 3 | A3 | A2 |
| HMIN | 248 | 237 | 220 | 215 | 201 | 263 | | 109 | 109 | 105 | | |
| SCAT | 34.3 | 34.5 | 34.3 | 28.4 | 63.6 | 38.8 | | 27.6 | 40.0 | 37.2 | | |
| HMAXF | 327 | 317 | 292 | 273 | 308 | 348 | | 238 | 246 | 256 | | |
| SHMAX | 120 | 112 | 103 | 76 | 92 | 47 | | 248 | 384 | 493 | | |
| KM | | | | | | | | | | | | |
| 350 | | | | | | 83.1 | | | | | | |
| 340 | | | | | | 82.3 | | | | | | |
| 330 | 247 | | | | | 78.8 | | | | | | |
| 320 | 244 | 232 | | | | 72.4 | | | | | | |
| 310 | 231 | 230 | | | 111 | 63.9 | | | | | | |
| 300 | 208 | 218 | 226 | | 110 | 54.2 | | | | | | |
| 290 | 176 | 196 | 226 | | 108 | 43.5 | | | | | | |
| 280 | 136 | 164 | 219 | 206 | 105 | 31.0 | | | | | | |
| 270 | 89.2 | 125 | 203 | 205 | 99.3 | 18.8 | | | | | | |
| 260 | 46.1 | 84.0 | 178 | 195 | 94.5 | | | | | 651 | | |
| 250 | 17.2 | 43.7 | 140 | 173 | 89.3 | | | | 591 | 647 | | |
| 240 | | 16.2 | 90.6 | 131 | 83.4 | | | 494 | 588 | 622 | | |
| 230 | | | 41.2 | 71.6 | 76.2 | | | 484 | 568 | 571 | | |
| 220 | | | 3.1 | 29.4 | 65.3 | | | 443 | 530 | 505 | | |
| 210 | | | | | 45.3 | | | 363 | 471 | 433 | | |
| 200 | | | | | | | | 264 | 385 | 371 | | |
| 190 | | | | | | | | 187 | 286 | 325 | | |
| 180 | | | | | | | | 139 | 220 | 288 | | |
| 170 | | | | | | | | 108 | 179 | 255 | | |
| 160 | | | | | | | | 87.4 | 142 | 221 | | |
| 150 | | | | | | | | 74.3 | 113 | 181 | | |
| 140 | | | | | | | | 67.7 | 98.5 | 135 | | |
| 130 | | | | | | | | 64.7 | 93.4 | 123 | | |
| 120 | | | | | | | | 53.8 | 90.7 | 118 | | |
| 110 | | | | | | | | 19.7 | 38.1 | 103 | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 4 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | A2 | 2 | 2 | 2 | 3 | S3 | 3 | 2 | A2 | 2 | A1 |
| HMIN | 108 | 107 | 107 | 106 | 107 | 108 | 100 | 210 | 247 | 278 | 284 | 269 |
| SCAT | 40.0 | 45.5 | 54.6 | 39.0 | 41.8 | 49.0 | 36.9 | 47.7 | 48.4 | 42.5 | 40.6 | 32.7 |
| HMAXF | 280 | 293 | 298 | 283 | 273 | 271 | 252 | 315 | 356 | 389 | 390 | 350 |
| SHMAX | 939 | 1004 | 1053 | 850 | 736 | 661 | 369 | 209 | 199 | 182 | 178 | 158 |
| KM | | | | | | | | | | | | |
| 400 | | | | | | | | | | | 296 | |
| 390 | | | | | | | | | | 284 | 296 | |
| 380 | | | | | | | | | | 281 | 291 | |
| 370 | | | | | | | | | | 270 | 278 | |
| 360 | | | | | | | | | 292 | 251 | 256 | |
| 350 | | | | | | | | | 291 | 226 | 224 | 334 |
| 340 | | | | | | | | | 284 | 198 | 187 | 327 |
| 330 | | | | | | | | | 270 | 164 | 148 | 301 |
| 320 | | | | | | | | 311 | 252 | 124 | 107 | 266 |
| 310 | | | | | | | | 310 | 229 | 87.6 | 69.9 | 218 |
| 300 | | 1131 | 1131 | | | | | 303 | 199 | 59.7 | 42.7 | 160 |
| 290 | 1201 | 1130 | 1125 | 1131 | | | | 289 | 164 | 34.6 | 21.7 | 99.8 |
| 280 | 1201 | 1107 | 1100 | 1129 | 1013 | 928 | | 269 | 127 | 12.4 | | 46.5 |
| 270 | 1182 | 1057 | 1057 | 1099 | 1011 | 928 | | 240 | 90.0 | | | 12.4 |
| 260 | 1119 | 976 | 994 | 1028 | 988 | 917 | 666 | 206 | 52.5 | | | |
| 250 | 1031 | 883 | 910 | 927 | 934 | 887 | 666 | 169 | 21.5 | | | |
| 240 | 908 | 780 | 807 | 794 | 855 | 838 | 650 | 132 | | | | |
| 230 | 766 | 679 | 685 | 647 | 742 | 766 | 607 | 92.4 | | | | |
| 220 | 625 | 582 | 570 | 510 | 596 | 656 | 544 | 54.7 | | | | |
| 210 | 501 | 498 | 471 | 408 | 466 | 497 | 456 | .4 | | | | |
| 200 | 413 | 428 | 391 | 345 | 369 | 363 | 327 | | | | | |
| 190 | 358 | 371 | 341 | 304 | 301 | 260 | 199 | | | | | |
| 180 | 324 | 326 | 309 | 277 | 255 | 198 | 120 | | | | | |
| 170 | 301 | 296 | 285 | 254 | 223 | 163 | 79.6 | | | | | |
| 160 | 282 | 269 | 266 | 231 | 199 | 136 | 58.9 | | | | | |
| 150 | 262 | 244 | 243 | 207 | 175 | 113 | 48.4 | | | | | |
| 140 | 238 | 218 | 213 | 182 | 147 | 95.0 | 41.7 | | | | | |
| 130 | 210 | 191 | 186 | 159 | 127 | 83.7 | 38.7 | | | | | |
| 120 | 181 | 172 | 167 | 146 | 116 | 78.8 | 36.7 | | | | | |
| 110 | 82.3 | 43.4 | 82.9 | 68.2 | 68.7 | 49.3 | 33.5 | | | | | |
| 100 | | | | | | | 19.7 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 5 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 1 | 1 | 1 | A1 | S1 | A1 | 0 | 0 | 0 | 0 |
| HMIN | 243 | 229 | 219 | 216 | 222 | 233 | 224 | | 105 | 104 | 109 | 108 |
| SCAT | 34.4 | 32.5 | 36.8 | 37.9 | 46.8 | 53.8 | 34.3 | | 37.7 | 49.8 | 56.6 | 44.9 |
| HMAXF | 323 | 303 | 294 | 299 | 316 | 336 | 294 | | 262 | 277 | 285 | 290 |
| SHMAX | 164 | 138 | 121 | 103 | 107 | 100 | 82 | | 459 | 723 | 809 | 972 |
| KM | | | | | | | | | | | | |
| 340 | | | | | | 142 | | | | | | |
| 330 | 342 | | | | | 142 | | | | | | |
| 320 | 341 | | | | 176 | 139 | | | | | | |
| 310 | 330 | 310 | | | 175 | 134 | | | | | | |
| 300 | 304 | 309 | 247 | 197 | 171 | 127 | 179 | | | | | |
| 290 | 265 | 298 | 247 | 194 | 163 | 116 | 179 | | | | 898 | 1184 |
| 280 | 215 | 272 | 238 | 184 | 150 | 103 | 172 | | | 854 | 897 | 1171 |
| 270 | 150 | 230 | 220 | 167 | 133 | 86.0 | 157 | | 645 | 850 | 883 | 1128 |
| 260 | 81.0 | 174 | 193 | 144 | 109 | 67.3 | 134 | | 644 | 830 | 855 | 1056 |
| 250 | 34.0 | 106 | 155 | 115 | 80.0 | 46.5 | 102 | | 629 | 792 | 814 | 953 |
| 240 | | 45.5 | 106 | 79.6 | 51.1 | 24.6 | 64.5 | | 591 | 738 | 759 | 815 |
| 230 | | 12.4 | 53.4 | 44.8 | 25.7 | | 30.0 | | 529 | 671 | 681 | 673 |
| 220 | | | 12.4 | 18.4 | | | | | 446 | 597 | 584 | 546 |
| 210 | | | | | | | | | 363 | 498 | 477 | 446 |
| 200 | | | | | | | | | 300 | 408 | 391 | 379 |
| 190 | | | | | | | | | 252 | 337 | 330 | 336 |
| 180 | | | | | | | | | 216 | 283 | 289 | 307 |
| 170 | | | | | | | | | 183 | 237 | 258 | 283 |
| 160 | | | | | | | | | 154 | 197 | 227 | 259 |
| 150 | | | | | | | | | 127 | 162 | 188 | 232 |
| 140 | | | | | | | | | 108 | 139 | 154 | 197 |
| 130 | | | | | | | | | 99.4 | 128 | 142 | 169 |
| 120 | | | | | | | | | 95.6 | 121 | 137 | 158 |
| 110 | | | | | | | | | 70.0 | 98.5 | 49.2 | 85.5 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 5 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | 1 | 1 | 1 | A0 | S0 | 0 | 1 | 1 | 1 | 0 |
| HMIN | 109 | 108 | 109 | 108 | 109 | 109 | | 199 | 231 | 254 | 260 | 271 |
| SCAT | 46.0 | 52.5 | 47.6 | 42.4 | 42.1 | 44.2 | | 45.0 | 40.7 | 42.9 | 45.2 | 44.3 |
| HMAXF | 290 | 302 | 306 | 295 | 284 | 273 | | 300 | 332 | 357 | 366 | 366 |
| SHMAX | 1004 | 1108 | 1164 | 1122 | 1027 | 790 | | 302 | 182 | 193 | 185 | 162 |
| KM | | | | | | | | | | | | |
| 370 | | | | | | | | | | | 293 | 270 |
| 360 | | | | | | | | | | 311 | 292 | 269 |
| 350 | | | | | | | | | | 309 | 285 | 262 |
| 340 | | | | | | | | | 292 | 299 | 269 | 247 |
| 330 | | | | | | | | | 292 | 279 | 248 | 227 |
| 320 | | | | | | | | | 285 | 253 | 218 | 199 |
| 310 | | 1147 | 1379 | | | | | 482 | 269 | 219 | 182 | 162 |
| 300 | | 1146 | 1373 | 1484 | | | | 482 | 246 | 182 | 142 | 121 |
| 290 | 1217 | 1133 | 1338 | 1478 | 1484 | | | 476 | 219 | 140 | 101 | 79.6 |
| 280 | 1204 | 1099 | 1266 | 1436 | 1480 | 1234 | | 458 | 191 | 96.9 | 60.0 | 39.5 |
| 270 | 1161 | 1039 | 1179 | 1346 | 1441 | 1233 | | 427 | 157 | 57.4 | 32.8 | |
| 260 | 1090 | 969 | 1060 | 1227 | 1360 | 1207 | | 386 | 120 | 28.0 | | |
| 250 | 990 | 888 | 910 | 1066 | 1236 | 1150 | | 334 | 79.6 | | | |
| 240 | 858 | 801 | 746 | 875 | 1059 | 1064 | | 272 | 39.5 | | | |
| 230 | 717 | 709 | 599 | 686 | 837 | 935 | | 202 | | | | |
| 220 | 584 | 607 | 484 | 532 | 635 | 738 | | 131 | | | | |
| 210 | 479 | 515 | 400 | 416 | 463 | 510 | | 67.2 | | | | |
| 200 | 399 | 434 | 349 | 344 | 346 | 312 | | 12.4 | | | | |
| 190 | 347 | 371 | 317 | 302 | 281 | 216 | | | | | | |
| 180 | 312 | 325 | 294 | 273 | 242 | 170 | | | | | | |
| 170 | 285 | 294 | 277 | 248 | 211 | 142 | | | | | | |
| 160 | 257 | 269 | 257 | 223 | 182 | 117 | | | | | | |
| 150 | 222 | 251 | 230 | 198 | 161 | 91.5 | | | | | | |
| 140 | 191 | 218 | 201 | 168 | 145 | 81.0 | | | | | | |
| 130 | 166 | 180 | 169 | 147 | 127 | 77.4 | | | | | | |
| 120 | 157 | 166 | 158 | 139 | 116 | 75.3 | | | | | | |
| 110 | 41.7 | 91.3 | 59.7 | 91.7 | 41.7 | 24.7 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 6 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | A1 | A1 | A2 |
| HMIN | 259 | 237 | 220 | 210 | 200 | 259 | 218 | 114 | 110 | 111 | 111 | |
| SCAT | 31.4 | 38.8 | 35.2 | 25.2 | 40.7 | 47.5 | 53.2 | 38.6 | 35.4 | 39.7 | 50.1 | |
| HMAXF | 340 | 316 | 285 | 262 | 254 | 346 | 313 | 240 | 249 | 258 | 290 | |
| SHMAX | 116 | 142 | 117 | 72 | 44 | 49 | 79 | 235 | 398 | 508 | 801 | |
| KM | | | | | | | | | | | | |
| 350 | 247 | | | | | 80.1 | | | | | | |
| 340 | 247 | | | | | 79.8 | | | | | | |
| 330 | 241 | | | | | 77.8 | | | | | | |
| 320 | 221 | 279 | | | | 73.9 | 120 | | | | | |
| 310 | 190 | 277 | | | | 68.7 | 120 | | | | | |
| 300 | 151 | 266 | | | | 60.5 | 118 | | | | 936 | |
| 290 | 111 | 247 | 268 | | | 50.8 | 114 | | | | 936 | |
| 280 | 68.3 | 216 | 266 | | | 39.7 | 110 | | | | 927 | |
| 270 | 36.1 | 171 | 256 | 227 | | 25.6 | 99.6 | | | | 899 | |
| 260 | 4.7 | 119 | 234 | 226 | 101 | 3.1 | 86.1 | | | 681 | 855 | |
| 250 | | 65.3 | 196 | 214 | 101 | | 68.9 | 396 | 616 | 675 | 786 | |
| 240 | | 22.5 | 137 | 181 | 98.1 | | 51.1 | 396 | 605 | 647 | 693 | |
| 230 | | | 69.2 | 122 | 92.4 | | 32.8 | 389 | 570 | 595 | 587 | |
| 220 | | | 12.4 | 45.2 | 82.6 | | 12.4 | 370 | 510 | 529 | 471 | |
| 210 | | | | 3.1 | 62.1 | | | 332 | 426 | 450 | 385 | |
| 200 | | | | | 12.4 | | | 273 | 341 | 373 | 329 | |
| 190 | | | | | | | | 207 | 271 | 315 | 294 | |
| 180 | | | | | | | | 151 | 221 | 275 | 268 | |
| 170 | | | | | | | | 108 | 186 | 243 | 243 | |
| 160 | | | | | | | | 84.9 | 158 | 215 | 213 | |
| 150 | | | | | | | | 73.7 | 134 | 190 | 174 | |
| 140 | | | | | | | | 56.5 | 107 | 152 | 151 | |
| 130 | | | | | | | | 52.6 | 89.5 | 124 | 143 | |
| 120 | | | | | | | | 43.2 | 83.8 | 87.0 | 116 | |
| 110 | | | | | | | | | 13.0 | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 6 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | A2 | A2 | A2 | A2 | A2 | A2 | A2 | A3 | 3 | 3 | 2 |
| HMIN | 111 | | | | | | | | 199 | 262 | 260 | 259 |
| SCAT | 42.4 | | | | | | | | 59.0 | 37.6 | 41.5 | 39.6 |
| HMAXF | 308 | | | | | | | | 351 | 351 | 355 | 345 |
| SHMAX | 964 | | | | | | | | 271 | 176 | 179 | 168 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | 293 | 326 | 309 | |
| 350 | | | | | | | | | 293 | 326 | 307 | 311 |
| 340 | | | | | | | | | 291 | 319 | 298 | 310 |
| 330 | | | | | | | | | 284 | 300 | 279 | 300 |
| 320 | | | | | | | | | 274 | 270 | 253 | 279 |
| 310 | 1184 | | | | | | | | 258 | 232 | 216 | 249 |
| 300 | 1173 | | | | | | | | 241 | 184 | 172 | 209 |
| 290 | 1129 | | | | | | | | 222 | 134 | 127 | 158 |
| 280 | 1051 | | | | | | | | 201 | 76.2 | 80.6 | 105 |
| 270 | 939 | | | | | | | | 178 | 34.2 | 38.9 | 49.7 |
| 260 | 803 | | | | | | | | 154 | | 3.9 | 12.4 |
| 250 | 656 | | | | | | | | 130 | | | |
| 240 | 525 | | | | | | | | 108 | | | |
| 230 | 424 | | | | | | | | 86.1 | | | |
| 220 | 367 | | | | | | | | 65.5 | | | |
| 210 | 332 | | | | | | | | 45.8 | | | |
| 200 | 308 | | | | | | | | 12.4 | | | |
| 190 | 286 | | | | | | | | | | | |
| 180 | 254 | | | | | | | | | | | |
| 170 | 207 | | | | | | | | | | | |
| 160 | 185 | | | | | | | | | | | |
| 150 | 171 | | | | | | | | | | | |
| 140 | 163 | | | | | | | | | | | |
| 130 | 158 | | | | | | | | | | | |
| 120 | 89.4 | | | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 7 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | A2 | A2 | S2 | F2 | 2 | 2 | A2 | A2 | A2 | 2 | A0 |
| HMIN | 280 | 252 | 234 | 209 | 210 | 268 | 229 | | 107 | | 109 | 109 |
| SCAT | 36.9 | 37.8 | 41.0 | 44.5 | 55.1 | 48.9 | 64.1 | | 61.4 | | 42.6 | 38.9 |
| HMAXF | 369 | 336 | 312 | 295 | 303 | 360 | 336 | | 284 | | 287 | 276 |
| SHMAX | 157 | 162 | 156 | 153 | 105 | 65 | 94 | | 601 | | 806 | 918 |
| KM | | | | | | | | | | | | |
| 370 | 289 | | | | | 103 | | | | | | |
| 360 | 285 | | | | | 103 | | | | | | |
| 350 | 269 | | | | | 102 | | | | | | |
| 340 | 246 | 311 | | | | 98.2 | 124 | | | | | |
| 330 | 213 | 310 | | | | 92.9 | 124 | | | | | |
| 320 | 173 | 298 | 304 | | | 85.1 | 122 | | | | | |
| 310 | 131 | 275 | 304 | | 156 | 74.2 | 119 | | | | | |
| 300 | 89.1 | 244 | 298 | 269 | 156 | 60.4 | 114 | | | | | |
| 290 | 50.1 | 202 | 283 | 268 | 154 | 45.9 | 108 | | 681 | | 985 | |
| 280 | 3.1 | 151 | 259 | 261 | 149 | 31.0 | 99.2 | | 681 | | 978 | 1323 |
| 270 | | 85.4 | 219 | 246 | 142 | 12.4 | 86.1 | | 673 | | 945 | 1315 |
| 260 | | 36.6 | 167 | 228 | 132 | | 69.2 | | 656 | | 880 | 1267 |
| 250 | | | 102 | 204 | 119 | | 48.8 | | 630 | | 802 | 1172 |
| 240 | | | 35.1 | 166 | 100 | | 29.5 | | 595 | | 715 | 1035 |
| 230 | | | | 109 | 76.1 | | 7.4 | | 550 | | 626 | 842 |
| 220 | | | | 47.9 | 41.1 | | | | 489 | | 528 | 647 |
| 210 | | | | 12.4 | 3.1 | | | | 410 | | 433 | 486 |
| 200 | | | | | | | | | 317 | | 359 | 390 |
| 190 | | | | | | | | | 240 | | 305 | 334 |
| 180 | | | | | | | | | 185 | | 257 | 300 |
| 170 | | | | | | | | | 146 | | 205 | 273 |
| 160 | | | | | | | | | 118 | | 175 | 246 |
| 150 | | | | | | | | | 101 | | 160 | 219 |
| 140 | | | | | | | | | 90.4 | | 151 | 193 |
| 130 | | | | | | | | | 84.0 | | 146 | 166 |
| 120 | | | | | | | | | 80.2 | | 142 | 153 |
| 110 | | | | | | | | | 59.2 | | 41.7 | 33.0 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 7 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | 0 | A0 | A1 | A1 | A1 | A0 | A0 | A0 | A2 |
| HMIN | 109 | 106 | 108 | 108 | | | | | | 269 | 268 | 249 |
| SCAT | 72.9 | 55.4 | 43.8 | 41.2 | | | | | | 51.5 | 46.7 | 32.3 |
| HMAXF | 304 | 314 | 302 | 292 | | | | | | 380 | 370 | 331 |
| SHMAX | 1136 | 1171 | 1233 | 1190 | | | | | | 189 | 179 | 129 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | | | | 271 | | |
| 380 | | | | | | | | | | 271 | | |
| 370 | | | | | | | | | | 269 | 283 | |
| 360 | | | | | | | | | | 261 | 280 | |
| 350 | | | | | | | | | | 248 | 270 | |
| 340 | | | | | | | | | | 229 | 254 | 264 |
| 330 | | | | | | | | | | 204 | 232 | 264 |
| 320 | | 1152 | | | | | | | | 174 | 203 | 256 |
| 310 | 1065 | 1150 | 1547 | | | | | | | 139 | 168 | 236 |
| 300 | 1065 | 1133 | 1546 | 1680 | | | | | | 103 | 126 | 206 |
| 290 | 1056 | 1098 | 1517 | 1679 | | | | | | 69.5 | 78.3 | 171 |
| 280 | 1037 | 1043 | 1443 | 1645 | | | | | | 39.2 | 39.1 | 127 |
| 270 | 1009 | 970 | 1343 | 1556 | | | | | | 12.4 | 12.4 | 84.3 |
| 260 | 970 | 884 | 1188 | 1427 | | | | | | | | 44.4 |
| 250 | 920 | 786 | 1000 | 1233 | | | | | | | | 12.4 |
| 240 | 860 | 686 | 815 | 985 | | | | | | | | |
| 230 | 785 | 590 | 646 | 753 | | | | | | | | |
| 220 | 698 | 507 | 509 | 560 | | | | | | | | |
| 210 | 592 | 441 | 413 | 427 | | | | | | | | |
| 200 | 479 | 391 | 358 | 351 | | | | | | | | |
| 190 | 378 | 353 | 325 | 306 | | | | | | | | |
| 180 | 321 | 324 | 303 | 275 | | | | | | | | |
| 170 | 286 | 300 | 283 | 251 | | | | | | | | |
| 160 | 254 | 274 | 260 | 226 | | | | | | | | |
| 150 | 221 | 242 | 231 | 199 | | | | | | | | |
| 140 | 193 | 205 | 196 | 170 | | | | | | | | |
| 130 | 175 | 181 | 172 | 149 | | | | | | | | |
| 120 | 166 | 168 | 159 | 139 | | | | | | | | |
| 110 | 41.7 | 124 | 70.6 | 84.1 | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 8 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | 3 | 3 | 3 | F2 | S2 | 2 | A1 | A1 | A1 | A2 |
| HMIN | 269 | 260 | 229 | 200 | 268 | 366 | 238 | 111 | 111 | 109 | | 108 |
| SCAT | 47.5 | 34.2 | 29.8 | 26.2 | 58.6 | 41.9 | 45.2 | 27.9 | 31.1 | 54.1 | | 40.9 |
| HMAXF | 365 | 335 | 294 | 247 | 388 | 446 | 328 | 237 | 248 | 279 | | 295 |
| SHMAX | 162 | 132 | 145 | 87 | 119 | 60 | 93 | 252 | 397 | 701 | | 1207 |
| KM | | | | | | | | | | | | |
| 450 | | | | | | 106 | | | | | | |
| 440 | | | | | | 105 | | | | | | |
| 430 | | | | | | 102 | | | | | | |
| 420 | | | | | | 95.9 | | | | | | |
| 410 | | | | | | 86.2 | | | | | | |
| 400 | | | | | | 73.2 | | | | | | |
| 390 | | | | | 148 | 59.5 | | | | | | |
| 380 | | | | | 147 | 42.0 | | | | | | |
| 370 | 258 | | | | 144 | 21.7 | | | | | | |
| 360 | 257 | | | | 139 | | | | | | | |
| 350 | 251 | | | | 131 | | | | | | | |
| 340 | 240 | 284 | | | 122 | | | | | | | |
| 330 | 223 | 282 | | | 112 | | 156 | | | | | |
| 320 | 199 | 270 | | | 99.1 | | 155 | | | | | |
| 310 | 170 | 244 | | | 85.1 | | 150 | | | | | |
| 300 | 133 | 209 | 358 | | 68.1 | | 141 | | | | | 1605 |
| 290 | 92.4 | 159 | 356 | | 50.8 | | 129 | | | | | 1598 |
| 280 | 47.8 | 98.7 | 337 | | 32.9 | | 112 | | | 812 | | 1548 |
| 270 | 12.4 | 42.2 | 298 | | 12.4 | | 89.5 | | | 806 | | 1447 |
| 260 | | 3.1 | 240 | | | | 63.5 | | | 786 | | 1299 |
| 250 | | | 160 | 273 | | | 38.0 | | 694 | 752 | | 1110 |
| 240 | | | 66.7 | 267 | | | 12.4 | 517 | 682 | 705 | | 915 |
| 230 | | | 12.4 | 242 | | | | 510 | 631 | 639 | | 729 |
| 220 | | | | 193 | | | | 471 | 552 | 559 | | 574 |
| 210 | | | | 88.9 | | | | 402 | 446 | 471 | | 465 |
| 200 | | | | 12.4 | | | | 301 | 338 | 390 | | 394 |
| 190 | | | | | | | | 208 | 257 | 324 | | 347 |
| 180 | | | | | | | | 142 | 196 | 272 | | 311 |
| 170 | | | | | | | | 98.1 | 151 | 230 | | 278 |
| 160 | | | | | | | | 76.6 | 118 | 193 | | 247 |
| 150 | | | | | | | | 64.3 | 102 | 159 | | 218 |
| 140 | | | | | | | | 61.3 | 97.0 | 133 | | 184 |
| 130 | | | | | | | | 59.8 | 93.2 | 118 | | 156 |
| 120 | | | | | | | | 45.5 | 59.7 | 109 | | 143 |
| 110 | | | | | | | | | | 24.2 | | 38.8 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 8 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | C1 | A1 | 1 | A1 | A1 | A1 | A2 | A2 | A2 | 2 |
| HMIN | 108 | 108 | | 109 | 108 | 108 | | 211 | 231 | 280 | 269 | 237 |
| SCAT | 48.9 | 48.7 | | 36.0 | 46.5 | 48.1 | | 38.4 | 49.6 | 32.9 | 48.0 | 30.7 |
| HMAXF | 297 | 302 | | 284 | 284 | 280 | | 309 | 334 | 367 | 393 | 313 |
| SHMAX | 1292 | 1345 | | 1143 | 1017 | 698 | | 279 | 275 | 173 | 265 | 182 |
| KM | | | | | | | | | | | | |
| 400 | | | | | | | | | | | 390 | |
| 390 | | | | | | | | | | | 390 | |
| 380 | | | | | | | | | | | 383 | |
| 370 | | | | | | | | | | 338 | 368 | |
| 360 | | | | | | | | | | 335 | 345 | |
| 350 | | | | | | | | | | 317 | 310 | |
| 340 | | | | | | | | | 422 | 283 | 266 | |
| 330 | | | | | | | | | 422 | 243 | 215 | |
| 320 | | | | | | | | | 414 | 197 | 161 | 411 |
| 310 | | 1561 | | | | | | 491 | 398 | 147 | 114 | 410 |
| 300 | 1605 | 1560 | | | | | | 484 | 374 | 94.9 | 78.0 | 393 |
| 290 | 1598 | 1537 | | 1792 | 1360 | 932 | | 461 | 339 | 49.7 | 50.8 | 354 |
| 280 | 1559 | 1481 | | 1787 | 1357 | 932 | | 420 | 293 | 1.7 | 30.3 | 299 |
| 270 | 1484 | 1388 | | 1724 | 1329 | 922 | | 369 | 237 | | 6.8 | 226 |
| 260 | 1381 | 1271 | | 1591 | 1269 | 891 | | 310 | 176 | | | 141 |
| 250 | 1232 | 1125 | | 1392 | 1174 | 840 | | 239 | 104 | | | 68.0 |
| 240 | 1047 | 964 | | 1134 | 1058 | 768 | | 163 | 45.4 | | | 22.7 |
| 230 | 839 | 799 | | 849 | 901 | 664 | | 94.2 | | | | |
| 220 | 651 | 643 | | 616 | 716 | 553 | | 43.4 | | | | |
| 210 | 504 | 523 | | 457 | 544 | 439 | | | | | | |
| 200 | 403 | 437 | | 359 | 409 | 333 | | | | | | |
| 190 | 343 | 381 | | 305 | 314 | 252 | | | | | | |
| 180 | 307 | 340 | | 270 | 256 | 192 | | | | | | |
| 170 | 281 | 306 | | 241 | 217 | 147 | | | | | | |
| 160 | 256 | 274 | | 213 | 186 | 120 | | | | | | |
| 150 | 228 | 243 | | 187 | 158 | 102 | | | | | | |
| 140 | 189 | 209 | | 159 | 135 | 90.0 | | | | | | |
| 130 | 166 | 179 | | 143 | 122 | 82.5 | | | | | | |
| 120 | 157 | 164 | | 137 | 115 | 79.0 | | | | | | |
| 110 | 54.2 | 116 | | 41.7 | 62.1 | 31.7 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 9 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | 2 | 1 | 1 | 1 | 1 | S1 | A1 | 0 | 0 | A0 | 0 |
| HMIN | 229 | 229 | 236 | 214 | 219 | 248 | 237 | 111 | 107 | 106 | 110 | 107 |
| SCAT | 38.6 | 34.0 | 34.6 | 31.9 | 66.1 | 41.4 | 45.0 | 28.9 | 44.8 | 47.6 | 53.6 | 39.8 |
| HMAXF | 304 | 306 | 306 | 273 | 336 | 329 | 315 | 232 | 249 | 267 | 299 | 287 |
| SHMAX | 184 | 141 | 136 | 115 | 130 | 73 | 82 | 211 | 424 | 638 | 992 | 1104 |
| KM | | | | | | | | | | | | |
| 340 | | | | | 156 | | | | | | | |
| 330 | | | | | 156 | 130 | | | | | | |
| 320 | | | | | 154 | 128 | 148 | | | | | |
| 310 | 374 | 296 | 306 | | 150 | 123 | 148 | | | | | |
| 300 | 373 | 293 | 303 | | 145 | 114 | 144 | | | | 1095 | |
| 290 | 361 | 279 | 289 | | 138 | 102 | 137 | | | | 1087 | 1561 |
| 280 | 337 | 251 | 262 | 292 | 128 | 85.5 | 125 | | | | 1060 | 1548 |
| 270 | 299 | 213 | 217 | 291 | 117 | 66.2 | 108 | | | 815 | 1008 | 1488 |
| 260 | 242 | 164 | 156 | 279 | 102 | 44.3 | 83.3 | | | 811 | 948 | 1379 |
| 250 | 162 | 110 | 74.4 | 254 | 85.6 | 20.3 | 53.0 | | 594 | 790 | 870 | 1220 |
| 240 | 72.7 | 50.8 | 28.7 | 203 | 65.7 | | 23.4 | 450 | 588 | 750 | 777 | 1032 |
| 230 | 12.4 | 12.4 | | 132 | 41.2 | | | 449 | 567 | 693 | 667 | 824 |
| 220 | | | | 45.0 | 12.4 | | | 430 | 533 | 613 | 554 | 611 |
| 210 | | | | | | | | 384 | 481 | 512 | 458 | 448 |
| 200 | | | | | | | | 298 | 406 | 406 | 377 | 366 |
| 190 | | | | | | | | 188 | 326 | 324 | 321 | 317 |
| 180 | | | | | | | | 112 | 256 | 268 | 284 | 284 |
| 170 | | | | | | | | 78.5 | 201 | 228 | 250 | 257 |
| 160 | | | | | | | | 64.6 | 162 | 194 | 209 | 226 |
| 150 | | | | | | | | 59.4 | 132 | 164 | 172 | 182 |
| 140 | | | | | | | | 56.7 | 112 | 141 | 150 | 163 |
| 130 | | | | | | | | 55.3 | 101 | 126 | 141 | 155 |
| 120 | | | | | | | | 51.2 | 95.7 | 117 | 136 | 150 |
| 110 | | | | | | | | | 69.9 | 99.4 | 13.0 | 44.7 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 9 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | 0 | A0 | A0 | A0 | 0 | 0 | 0 | A0 | 0 |
| HMIN | 110 | 109 | 108 | 108 | 109 | 110 | 100 | 211 | 239 | 269 | 277 | 290 |
| SCAT | 36.6 | 45.9 | 45.4 | 36.2 | 40.0 | 43.2 | 38.0 | 46.4 | 41.7 | 37.3 | 43.4 | 40.6 |
| HMAXF | 279 | 296 | 292 | 289 | 274 | 271 | 254 | 305 | 330 | 353 | 371 | 372 |
| SHMAX | 1139 | 1209 | 1215 | 1171 | 853 | 628 | 382 | 224 | 174 | 158 | 184 | 177 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | | 310 | 326 |
| 370 | | | | | | | | | | | 310 | 326 |
| 360 | | | | | | | | | | 297 | 305 | 319 |
| 350 | | | | | | | | | | 297 | 292 | 303 |
| 340 | | | | | | | | | 297 | 288 | 271 | 277 |
| 330 | | | | | | | | | 297 | 268 | 240 | 241 |
| 320 | | | | | | | | | 293 | 239 | 201 | 193 |
| 310 | | | | | | | | 374 | 280 | 200 | 158 | 134 |
| 300 | | 1477 | 1526 | | | | | 374 | 258 | 157 | 111 | 75.7 |
| 290 | | 1471 | 1525 | 1792 | | | | 365 | 229 | 110 | 61.4 | 12.4 |
| 280 | 1712 | 1434 | 1499 | 1763 | 1229 | 898 | | 348 | 194 | 61.2 | 21.6 | |
| 270 | 1686 | 1359 | 1437 | 1665 | 1226 | 898 | | 322 | 156 | 12.4 | | |
| 260 | 1596 | 1252 | 1334 | 1499 | 1191 | 883 | 636 | 283 | 109 | | | |
| 250 | 1444 | 1116 | 1209 | 1266 | 1115 | 845 | 634 | 228 | 58.0 | | | |
| 240 | 1229 | 953 | 1042 | 989 | 1008 | 783 | 615 | 167 | 12.4 | | | |
| 230 | 999 | 783 | 858 | 731 | 874 | 695 | 573 | 106 | | | | |
| 220 | 774 | 625 | 685 | 536 | 715 | 588 | 512 | 53.2 | | | | |
| 210 | 564 | 501 | 537 | 409 | 557 | 465 | 426 | | | | | |
| 200 | 429 | 419 | 432 | 338 | 413 | 339 | 324 | | | | | |
| 190 | 357 | 368 | 366 | 297 | 309 | 255 | 225 | | | | | |
| 180 | 317 | 335 | 322 | 269 | 252 | 201 | 151 | | | | | |
| 170 | 286 | 307 | 290 | 247 | 220 | 160 | 105 | | | | | |
| 160 | 258 | 273 | 265 | 223 | 193 | 132 | 78.3 | | | | | |
| 150 | 222 | 235 | 234 | 195 | 169 | 110 | 61.7 | | | | | |
| 140 | 189 | 195 | 198 | 169 | 148 | 94.9 | 51.7 | | | | | |
| 130 | 172 | 171 | 172 | 151 | 132 | 84.3 | 46.3 | | | | | |
| 120 | 164 | 155 | 158 | 140 | 118 | 79.0 | 43.7 | | | | | |
| 110 | 12.4 | 33.1 | 81.7 | 54.2 | 25.3 | 13.0 | 40.7 | | | | | |
| 100 | | | | | | | 19.7 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 10 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | 0 | A0 | 0 | A0 | A0 | 0 | 0 | 0 | 0 |
| HMIN | 267 | 249 | 236 | 213 | 226 | 223 | 220 | 111 | 108 | 104 | 105 | 108 |
| SCAT | 38.1 | 36.3 | 31.5 | 19.5 | 48.0 | 45.4 | 39.0 | 37.4 | 32.7 | 47.1 | 49.1 | 42.6 |
| HMAXF | 351 | 324 | 301 | 252 | 306 | 309 | 307 | 246 | 241 | 265 | 277 | 286 |
| SHMAX | 165 | 162 | 151 | 88 | 92 | 73 | 75 | 269 | 378 | 570 | 794 | 1057 |
| KM | | | | | | | | | | | | |
| 360 | 311 | | | | | | | | | | | |
| 350 | 311 | | | | | | | | | | | |
| 340 | 305 | | | | | | | | | | | |
| 330 | 287 | 342 | | | | | | | | | | |
| 320 | 259 | 341 | | | | | | | | | | |
| 310 | 220 | 329 | 366 | | 162 | 124 | 133 | | | | | |
| 300 | 175 | 306 | 366 | | 161 | 123 | 132 | | | | | |
| 290 | 123 | 266 | 355 | | 158 | 119 | 127 | | | | | 1391 |
| 280 | 65.8 | 209 | 326 | | 150 | 111 | 117 | | | | 936 | 1385 |
| 270 | 21.6 | 135 | 276 | | 140 | 101 | 104 | | | 714 | 932 | 1343 |
| 260 | | 65.2 | 204 | 363 | 122 | 86.9 | 87.9 | | | 712 | 909 | 1260 |
| 250 | | 12.4 | 107 | 361 | 94.2 | 68.7 | 68.9 | 450 | 621 | 696 | 866 | 1141 |
| 240 | | | 29.4 | 325 | 59.8 | 46.1 | 47.9 | 447 | 621 | 664 | 804 | 972 |
| 230 | | | | 227 | 25.6 | 23.7 | 28.2 | 429 | 604 | 617 | 718 | 774 |
| 220 | | | | 57.7 | | | 1.9 | 396 | 557 | 551 | 612 | 605 |
| 210 | | | | | | | | 344 | 482 | 474 | 500 | 485 |
| 200 | | | | | | | | 272 | 384 | 393 | 408 | 403 |
| 190 | | | | | | | | 196 | 298 | 328 | 347 | 353 |
| 180 | | | | | | | | 135 | 236 | 273 | 306 | 320 |
| 170 | | | | | | | | 99.2 | 195 | 228 | 277 | 296 |
| 160 | | | | | | | | 81.0 | 165 | 190 | 256 | 271 |
| 150 | | | | | | | | 70.5 | 136 | 149 | 236 | 244 |
| 140 | | | | | | | | 63.0 | 113 | 127 | 202 | 217 |
| 130 | | | | | | | | 57.3 | 99.8 | 117 | 162 | 180 |
| 120 | | | | | | | | 41.1 | 95.1 | 111 | 145 | 156 |
| 110 | | | | | | | | | 72.5 | 96.2 | 94.4 | 46.0 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 10 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A1 | 1 | 1 | A1 | S1 | 81 | 1 | 1 | 1 | 2 |
| HMIN | 106 | 106 | 107 | 105 | 108 | 107 | 100 | | 217 | 257 | 249 | 252 |
| SCAT | 39.7 | 48.4 | 53.6 | 35.1 | 39.4 | 52.9 | 37.3 | | 36.9 | 39.6 | 36.0 | 30.2 |
| HMAXF | 283 | 309 | 319 | 280 | 274 | 287 | 278 | | 313 | 353 | 349 | 329 |
| SHMAX | 996 | 1251 | 1570 | 1144 | 913 | 784 | 491 | | 197 | 186 | 180 | 141 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | | 326 | | |
| 350 | | | | | | | | | | 326 | 325 | |
| 340 | | | | | | | | | | 317 | 319 | |
| 330 | | | | | | | | | | 298 | 301 | 314 |
| 320 | | | 1843 | | | | | | 346 | 269 | 270 | 307 |
| 310 | | 1398 | 1830 | | | | | | 346 | 230 | 232 | 282 |
| 300 | | 1385 | 1786 | | | | | | 336 | 188 | 188 | 245 |
| 290 | 1391 | 1342 | 1705 | | | 980 | | | 311 | 139 | 142 | 196 |
| 280 | 1389 | 1267 | 1603 | 1843 | 1360 | 977 | 812 | | 282 | 91.5 | 99.3 | 140 |
| 270 | 1353 | 1167 | 1452 | 1809 | 1356 | 956 | 802 | | 247 | 51.9 | 61.2 | 79.3 |
| 260 | 1271 | 1043 | 1249 | 1696 | 1315 | 918 | 764 | | 204 | 19.9 | 33.4 | 35.0 |
| 250 | 1149 | 902 | 1024 | 1517 | 1231 | 863 | 695 | | 155 | | 4.7 | |
| 240 | 982 | 762 | 798 | 1269 | 1100 | 790 | 606 | | 102 | | | |
| 230 | 773 | 626 | 615 | 962 | 932 | 699 | 504 | | 53.9 | | | |
| 220 | 582 | 514 | 472 | 687 | 736 | 591 | 374 | | 19.3 | | | |
| 210 | 445 | 434 | 389 | 490 | 550 | 468 | 258 | | | | | |
| 200 | 373 | 380 | 339 | 370 | 408 | 350 | 173 | | | | | |
| 190 | 332 | 342 | 306 | 310 | 309 | 253 | 114 | | | | | |
| 180 | 303 | 315 | 282 | 274 | 255 | 186 | 77.8 | | | | | |
| 170 | 274 | 291 | 261 | 248 | 221 | 146 | 57.2 | | | | | |
| 160 | 241 | 269 | 226 | 226 | 194 | 120 | 46.5 | | | | | |
| 150 | 216 | 239 | 175 | 203 | 170 | 98.0 | 40.5 | | | | | |
| 140 | 162 | 202 | 146 | 172 | 147 | 83.0 | 37.4 | | | | | |
| 130 | 150 | 179 | 134 | 149 | 129 | 76.1 | 36.1 | | | | | |
| 120 | 145 | 160 | 127 | 135 | 120 | 72.8 | 33.6 | | | | | |
| 110 | 95.1 | 96.1 | 90.5 | 101 | 64.7 | 37.6 | 29.0 | | | | | |
| 100 | | | | | | | 12.4 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 11 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| HMIN | 257 | 239 | 230 | 207 | 216 | 259 | 220 | 109 | 105 | 106 | 106 | 109 |
| SCAT | 35.1 | 32.6 | 27.9 | 22.8 | 59.1 | 48.5 | 65.1 | 41.9 | 32.2 | 41.1 | 48.4 | 51.5 |
| HMAXF | 332 | 314 | 280 | 253 | 327 | 340 | 334 | 263 | 258 | 269 | 290 | 284 |
| SHMAX | 131 | 128 | 112 | 72 | 83 | 55 | 97 | 302 | 443 | 672 | 899 | 1031 |
| KM | | | | | | | | | | | | |
| 340 | 270 | | | | | 91.5 | 115 | | | | | |
| 330 | 270 | | | | 106 | 90.6 | 115 | | | | | |
| 320 | 262 | 285 | | | 105 | 87.7 | 113 | | | | | |
| 310 | 243 | 284 | | | 103 | 82.8 | 111 | | | | | |
| 300 | 213 | 271 | | | 99.9 | 75.8 | 107 | | | | | |
| 290 | 176 | 247 | 326 | | 94.8 | 65.7 | 102 | | | | 1031 | 1184 |
| 280 | 131 | 207 | 326 | | 88.6 | 54.1 | 94.7 | | | | 1021 | 1176 |
| 270 | 74.1 | 153 | 316 | | 81.2 | 37.8 | 86.3 | 416 | | 870 | 989 | 1145 |
| 260 | 25.5 | 93.5 | 285 | 247 | 72.1 | 12.4 | 77.1 | 416 | 688 | 859 | 931 | 1092 |
| 250 | | 43.5 | 221 | 246 | 61.5 | | 67.5 | 407 | 678 | 823 | 859 | 1019 |
| 240 | | 12.4 | 125 | 227 | 49.6 | | 57.3 | 383 | 631 | 760 | 771 | 918 |
| 230 | | | 12.4 | 179 | 35.2 | | 41.8 | 353 | 562 | 677 | 662 | 802 |
| 220 | | | | 94.5 | 18.4 | | 1.7 | 313 | 469 | 581 | 546 | 665 |
| 210 | | | | 22.8 | | | | 265 | 378 | 481 | 455 | 538 |
| 200 | | | | | | | | 214 | 301 | 403 | 384 | 439 |
| 190 | | | | | | | | 169 | 247 | 340 | 332 | 373 |
| 180 | | | | | | | | 134 | 206 | 291 | 296 | 329 |
| 170 | | | | | | | | 106 | 171 | 250 | 267 | 296 |
| 160 | | | | | | | | 87.2 | 143 | 216 | 239 | 264 |
| 150 | | | | | | | | 75.0 | 121 | 188 | 213 | 231 |
| 140 | | | | | | | | 67.3 | 99.6 | 164 | 190 | 201 |
| 130 | | | | | | | | 61.2 | 90.9 | 139 | 161 | 171 |
| 120 | | | | | | | | 49.6 | 87.6 | 123 | 144 | 153 |
| 110 | | | | | | | | 22.0 | 71.8 | 86.7 | 54.1 | 59.7 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 11 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | 3 | A3 | A3 | A3 | S3 | 3 | 5 | 5 | 5 | 4 |
| HMIN | 104 | 105 | 104 | | | | 100 | 209 | 198 | 249 | 282 | 258 |
| SCAT | 41.6 | 47.8 | 44.0 | | | | 40.5 | 36.5 | 39.2 | 41.2 | 42.8 | 37.0 |
| HMAXF | 285 | 298 | 305 | | | | 285 | 295 | 313 | 355 | 382 | 359 |
| SHMAX | 968 | 1123 | 1261 | | | | 598 | 324 | 272 | 227 | 245 | 209 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | | | | | 411 | |
| 380 | | | | | | | | | | | 410 | |
| 370 | | | | | | | | | | | 402 | |
| 360 | | | | | | | | | | 368 | 383 | 371 |
| 350 | | | | | | | | | | 366 | 352 | 366 |
| 340 | | | | | | | | | | 356 | 311 | 347 |
| 330 | | | | | | | | | | 332 | 256 | 315 |
| 320 | | | | | | | | | 448 | 302 | 195 | 275 |
| 310 | | | 1561 | | | | | | 448 | 264 | 137 | 227 |
| 300 | | 1298 | 1556 | | | | | 651 | 436 | 221 | 80.6 | 176 |
| 290 | 1217 | 1284 | 1517 | | | | 954 | 648 | 408 | 175 | 36.4 | 127 |
| 280 | 1213 | 1251 | 1437 | | | | 950 | 624 | 370 | 126 | | 76.3 |
| 270 | 1179 | 1183 | 1316 | | | | 919 | 574 | 323 | 79.9 | | 39.1 |
| 260 | 1105 | 1090 | 1160 | | | | 853 | 503 | 267 | 41.8 | | 12.4 |
| 250 | 1005 | 967 | 983 | | | | 780 | 399 | 206 | 12.4 | | |
| 240 | 875 | 819 | 806 | | | | 673 | 279 | 150 | | | |
| 230 | 730 | 674 | 642 | | | | 527 | 143 | 102 | | | |
| 220 | 599 | 548 | 512 | | | | 374 | 62.3 | 64.2 | | | |
| 210 | 491 | 451 | 420 | | | | 245 | 12.4 | 36.8 | | | |
| 200 | 409 | 388 | 360 | | | | 156 | | 12.4 | | | |
| 190 | 356 | 346 | 319 | | | | 108 | | | | | |
| 180 | 321 | 318 | 291 | | | | 77.3 | | | | | |
| 170 | 293 | 296 | 265 | | | | 57.6 | | | | | |
| 160 | 265 | 273 | 239 | | | | 46.6 | | | | | |
| 150 | 232 | 248 | 209 | | | | 40.4 | | | | | |
| 140 | 197 | 214 | 184 | | | | 36.7 | | | | | |
| 130 | 175 | 183 | 165 | | | | 34.2 | | | | | |
| 120 | 166 | 168 | 154 | | | | 32.9 | | | | | |
| 110 | 114 | 108 | 117 | | | | 30.4 | | | | | |
| 100 | | | | | | | 12.4 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 12 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 4 | 4 | 4 | 4 | 4 | 3 | 3 | S3 | 3 | 3 | 3 | 3 |
| HMIN | 241 | 271 | 228 | 207 | 206 | 258 | 218 | 109 | 107 | 105 | 106 | 103 |
| SCAT | 39.5 | 46.2 | 26.4 | 27.0 | 77.6 | 56.6 | 47.0 | 47.1 | 48.4 | 34.3 | 38.9 | 54.6 |
| HMAXF | 347 | 374 | 287 | 260 | 342 | 366 | 319 | 270 | 267 | 277 | 280 | 284 |
| SHMAX | 212 | 250 | 178 | 111 | 130 | 91 | 89 | 340 | 501 | 742 | 1035 | 1062 |
| KM | | | | | | | | | | | | |
| 400 | 358 | | | | | | | | | | | |
| 390 | 355 | | | | | | | | | | | |
| 380 | 342 | 392 | | | | | | | | | | |
| 370 | 316 | 392 | | | | 127 | | | | | | |
| 360 | 282 | 384 | | | | 127 | | | | | | |
| 350 | 242 | 369 | | | 127 | 125 | | | | | | |
| 340 | 196 | 345 | | | 127 | 121 | | | | | | |
| 330 | 149 | 311 | | | 127 | 114 | | | | | | |
| 320 | 96.4 | 263 | | | 125 | 106 | 135 | | | | | |
| 310 | 55.3 | 208 | | | 122 | 93.4 | 134 | | | | | |
| 300 | 28.8 | 151 | | | 118 | 77.3 | 129 | | | | | |
| 290 | | 90.7 | 494 | | 113 | 59.6 | 122 | | | | 1547 | 1217 |
| 280 | | 38.5 | 486 | | 107 | 42.0 | 112 | 489 | | 1041 | 1547 | 1215 |
| 270 | | | 443 | 326 | 101 | 26.5 | 99.1 | 489 | 621 | 1031 | 1519 | 1196 |
| 260 | | | 369 | 326 | 93.8 | 7.9 | 83.1 | 483 | 618 | 971 | 1440 | 1157 |
| 250 | | | 253 | 315 | 86.5 | | 65.8 | 467 | 602 | 885 | 1310 | 1098 |
| 240 | | | 115 | 283 | 78.5 | | 49.5 | 441 | 572 | 759 | 1104 | 1014 |
| 230 | | | 31.7 | 219 | 67.8 | | 33.2 | 397 | 529 | 614 | 854 | 903 |
| 220 | | | | 110 | 50.4 | | 12.4 | 326 | 475 | 493 | 621 | 774 |
| 210 | | | | 25.1 | 22.8 | | | 245 | 413 | 406 | 461 | 630 |
| 200 | | | | | | | | 175 | 347 | 347 | 369 | 507 |
| 190 | | | | | | | | 129 | 282 | 305 | 318 | 407 |
| 180 | | | | | | | | 100 | 226 | 274 | 286 | 339 |
| 170 | | | | | | | | 81.8 | 181 | 247 | 260 | 298 |
| 160 | | | | | | | | 71.5 | 148 | 220 | 234 | 261 |
| 150 | | | | | | | | 65.8 | 124 | 188 | 205 | 230 |
| 140 | | | | | | | | 58.8 | 109 | 158 | 174 | 203 |
| 130 | | | | | | | | 54.5 | 102 | 139 | 153 | 173 |
| 120 | | | | | | | | 43.6 | 94.9 | 130 | 143 | 160 |
| 110 | | | | | | | | 17.0 | 42.6 | 99.6 | 57.2 | 133 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 12 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 3 | 3 | 2 | 2 | A2 | 2 | A2 | A2 | A2 | S2 | A2 | 4 |
| HMIN | 106 | 108 | 108 | 109 | 108 | 109 | | 220 | | 279 | | 240 |
| SCAT | 53.7 | 60.6 | 45.0 | 36.3 | 50.6 | 45.2 | | 46.0 | | 41.4 | | 40.2 |
| HMAXF | 293 | 332 | 322 | 291 | 283 | 279 | | 331 | | 371 | | 335 |
| SHMAX | 1023 | 1292 | 1380 | 1244 | 1167 | 680 | | 322 | | 221 | | 229 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | 378 | | |
| 370 | | | | | | | | | | 378 | | |
| 360 | | | | | | | | | | 371 | | |
| 350 | | | | | | | | | | 350 | | |
| 340 | | 1126 | | | | | | 491 | | 324 | | 411 |
| 330 | | 1125 | 1590 | | | | | 491 | | 287 | | 409 |
| 320 | | 1115 | 1590 | | | | | 484 | | 238 | | 396 |
| 310 | | 1090 | 1564 | | | | | 465 | | 188 | | 369 |
| 300 | 1080 | 1049 | 1499 | 1956 | | | | 435 | | 135 | | 331 |
| 290 | 1079 | 990 | 1391 | 1956 | 1620 | | | 393 | | 72.1 | | 281 |
| 280 | 1064 | 923 | 1260 | 1910 | 1618 | 994 | | 343 | | 12.4 | | 217 |
| 270 | 1030 | 850 | 1101 | 1787 | 1591 | 984 | | 285 | | | | 148 |
| 260 | 975 | 776 | 932 | 1594 | 1533 | 949 | | 222 | | | | 80.3 |
| 250 | 905 | 700 | 769 | 1338 | 1444 | 891 | | 150 | | | | 39.7 |
| 240 | 822 | 623 | 633 | 1047 | 1312 | 805 | | 84.5 | | | | 3.9 |
| 230 | 730 | 555 | 523 | 733 | 1119 | 691 | | 40.5 | | | | |
| 220 | 630 | 497 | 443 | 528 | 866 | 542 | | 3.1 | | | | |
| 210 | 533 | 447 | 386 | 394 | 611 | 380 | | | | | | |
| 200 | 449 | 405 | 345 | 323 | 412 | 262 | | | | | | |
| 190 | 387 | 369 | 313 | 279 | 293 | 191 | | | | | | |
| 180 | 342 | 336 | 289 | 247 | 234 | 150 | | | | | | |
| 170 | 306 | 305 | 268 | 219 | 200 | 123 | | | | | | |
| 160 | 274 | 274 | 244 | 195 | 172 | 101 | | | | | | |
| 150 | 243 | 240 | 222 | 173 | 145 | 86.1 | | | | | | |
| 140 | 215 | 202 | 198 | 152 | 123 | 76.0 | | | | | | |
| 130 | 183 | 176 | 169 | 138 | 110 | 69.2 | | | | | | |
| 120 | 167 | 166 | 154 | 129 | 104 | 65.7 | | | | | | |
| 110 | 102 | 105 | 58.1 | 41.7 | 53.3 | 22.5 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 13 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 1 | 1 | 1 | 3 |
| HMIN | 236 | 226 | 211 | 218 | 222 | 246 | 287 | 111 | 108 | 102 | 107 | 105 |
| SCAT | 33.5 | 36.0 | 25.6 | 34.8 | 55.4 | 41.4 | 71.8 | 34.0 | 33.3 | 44.1 | 44.4 | 43.5 |
| HMAXF | 322 | 301 | 271 | 288 | 317 | 329 | 390 | 261 | 255 | 260 | 279 | 280 |
| SHMAX | 183 | 179 | 120 | 100 | 82 | 65 | 96 | 288 | 451 | 583 | 857 | 986 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | 123 | | | | | |
| 380 | | | | | | | 123 | | | | | |
| 370 | | | | | | | 121 | | | | | |
| 360 | | | | | | | 118 | | | | | |
| 350 | | | | | | | 114 | | | | | |
| 340 | | | | | | | 109 | | | | | |
| 330 | 373 | | | | | 116 | 101 | | | | | |
| 320 | 373 | | | | 122 | 115 | 88.5 | | | | | |
| 310 | 361 | 383 | | | 121 | 110 | 68.4 | | | | | |
| 300 | 332 | 383 | | | 119 | 102 | 39.7 | | | | | |
| 290 | 290 | 373 | | 217 | 114 | 91.0 | 16.2 | | | | | 1292 |
| 280 | 235 | 350 | 345 | 215 | 109 | 76.8 | | | | | 1075 | 1292 |
| 270 | 173 | 309 | 344 | 203 | 98.9 | 59.2 | | 494 | | 768 | 1065 | 1275 |
| 260 | 114 | 245 | 328 | 182 | 85.4 | 38.1 | | 493 | 747 | 768 | 1028 | 1223 |
| 250 | 59.6 | 165 | 285 | 151 | 68.8 | 18.4 | | 480 | 744 | 757 | 963 | 1139 |
| 240 | 22.1 | 75.6 | 212 | 110 | 47.6 | | | 445 | 711 | 727 | 871 | 1012 |
| 230 | | 26.3 | 111 | 61.9 | 24.8 | | | 385 | 646 | 676 | 749 | 843 |
| 220 | | | 42.1 | 17.8 | | | | 302 | 539 | 601 | 624 | 667 |
| 210 | | | | | | | | 223 | 419 | 507 | 510 | 521 |
| 200 | | | | | | | | 160 | 316 | 420 | 423 | 418 |
| 190 | | | | | | | | 118 | 245 | 346 | 361 | 357 |
| 180 | | | | | | | | 90.1 | 196 | 284 | 318 | 318 |
| 170 | | | | | | | | 71.8 | 160 | 237 | 281 | 288 |
| 160 | | | | | | | | 64.2 | 134 | 203 | 244 | 261 |
| 150 | | | | | | | | 60.8 | 117 | 157 | 210 | 234 |
| 140 | | | | | | | | 58.0 | 99.6 | 132 | 178 | 205 |
| 130 | | | | | | | | 54.3 | 90.8 | 122 | 152 | 176 |
| 120 | | | | | | | | 45.3 | 86.5 | 117 | 138 | 159 |
| 110 | | | | | | | | | 43.8 | 110 | 88.1 | 104 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 13 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 3 | 3 | 1 | 1 | 1 | A3 | S3 | 3 | 3 | 3 | S3 | 1 |
| HMIN | 104 | 109 | 107 | 107 | 107 | | 100 | 199 | 203 | 268 | 279 | 279 |
| SCAT | 37.1 | 46.8 | 42.9 | 34.4 | 39.7 | | 43.4 | 41.4 | 60.0 | 37.8 | 37.0 | 40.0 |
| HMAXF | 271 | 307 | 307 | 279 | 267 | | 286 | 297 | 319 | 369 | 364 | 371 |
| SHMAX | 803 | 1129 | 1376 | 1139 | 819 | | 579 | 369 | 288 | 177 | 168 | 177 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | | | 311 |
| 370 | | | | | | | | | | 311 | 322 | 311 |
| 360 | | | | | | | | | | 307 | 321 | 306 |
| 350 | | | | | | | | | | 292 | 310 | 290 |
| 340 | | | | | | | | | | 265 | 288 | 265 |
| 330 | | | | | | | | | | 231 | 251 | 232 |
| 320 | | | | | | | | | 387 | 189 | 208 | 192 |
| 310 | | 1240 | 1784 | | | | | | 384 | 144 | 157 | 146 |
| 300 | | 1233 | 1774 | | | | | 645 | 377 | 101 | 105 | 96.4 |
| 290 | | 1201 | 1717 | | | | 854 | 640 | 364 | 63.1 | 49.7 | 52.1 |
| 280 | 1105 | 1143 | 1610 | 1809 | | | 849 | 618 | 346 | 36.5 | 12.4 | 12.4 |
| 270 | 1105 | 1058 | 1459 | 1779 | 1269 | | 824 | 575 | 321 | 12.4 | | |
| 260 | 1083 | 949 | 1255 | 1669 | 1259 | | 772 | 515 | 286 | | | |
| 250 | 1015 | 828 | 1027 | 1495 | 1209 | | 705 | 438 | 237 | | | |
| 240 | 916 | 703 | 800 | 1258 | 1118 | | 616 | 345 | 181 | | | |
| 230 | 776 | 590 | 614 | 1001 | 991 | | 518 | 237 | 120 | | | |
| 220 | 635 | 497 | 485 | 741 | 816 | | 402 | 130 | 68.3 | | | |
| 210 | 513 | 426 | 407 | 529 | 616 | | 283 | 56.0 | 30.0 | | | |
| 200 | 416 | 376 | 359 | 394 | 436 | | 195 | 12.4 | | | | |
| 190 | 352 | 340 | 326 | 325 | 311 | | 129 | | | | | |
| 180 | 312 | 312 | 301 | 283 | 244 | | 87.3 | | | | | |
| 170 | 283 | 284 | 277 | 251 | 203 | | 62.9 | | | | | |
| 160 | 254 | 256 | 251 | 225 | 170 | | 49.2 | | | | | |
| 150 | 223 | 227 | 222 | 201 | 143 | | 40.9 | | | | | |
| 140 | 195 | 195 | 194 | 178 | 122 | | 36.9 | | | | | |
| 130 | 173 | 168 | 168 | 154 | 110 | | 35.0 | | | | | |
| 120 | 160 | 157 | 152 | 140 | 106 | | 33.4 | | | | | |
| 110 | 125 | 48.7 | 95.9 | 87.9 | 80.5 | | 30.0 | | | | | |
| 100 | | | | | | | 13.0 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 14 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | A2 | 2 | 0 |
| HMIN | 267 | 229 | 204 | 199 | 265 | 296 | 216 | 111 | 106 | 107 | 109 | 108 |
| SCAT | 36.0 | 25.1 | 26.5 | 30.0 | 47.0 | 38.0 | 47.1 | 35.3 | 28.0 | 40.0 | 44.8 | 40.1 |
| HMAXF | 348 | 284 | 254 | 253 | 361 | 371 | 315 | 241 | 239 | 255 | 271 | 276 |
| SHMAX | 153 | 144 | 111 | 43 | 50 | 42 | 78 | 252 | 402 | 523 | 729 | 836 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | 80.4 | | | | | | |
| 370 | | | | | 78.2 | 80.4 | | | | | | |
| 360 | | | | | 78.2 | 78.7 | | | | | | |
| 350 | 297 | | | | 77.2 | 73.9 | | | | | | |
| 340 | 294 | | | | 74.4 | 67.0 | | | | | | |
| 330 | 280 | | | | 69.8 | 57.1 | | | | | | |
| 320 | 253 | | | | 63.2 | 44.9 | 123 | | | | | |
| 310 | 219 | | | | 54.4 | 31.7 | 123 | | | | | |
| 300 | 176 | | | | 44.5 | 17.0 | 120 | | | | | |
| 290 | 132 | 430 | | | 34.7 | | 115 | | | | | |
| 280 | 83.6 | 428 | | | 25.4 | | 107 | | | | 958 | 1075 |
| 270 | 25.1 | 397 | | | 14.6 | | 94.5 | | | | 958 | 1068 |
| 260 | | 332 | 342 | 114 | | | 78.6 | | | 779 | 943 | 1030 |
| 250 | | 230 | 340 | 114 | | | 60.0 | 450 | | 776 | 905 | 956 |
| 240 | | 94.3 | 319 | 109 | | | 42.6 | 450 | 747 | 752 | 846 | 857 |
| 230 | | 22.0 | 271 | 97.4 | | | 28.1 | 438 | 729 | 705 | 741 | 741 |
| 220 | | | 177 | 76.8 | | | 14.8 | 408 | 665 | 629 | 606 | 622 |
| 210 | | | 93.6 | 44.0 | | | | 360 | 543 | 511 | 483 | 517 |
| 200 | | | | 12.4 | | | | 288 | 406 | 394 | 392 | 433 |
| 190 | | | | | | | | 202 | 303 | 306 | 331 | 369 |
| 180 | | | | | | | | 130 | 234 | 251 | 293 | 321 |
| 170 | | | | | | | | 95.8 | 191 | 202 | 264 | 284 |
| 160 | | | | | | | | 78.1 | 161 | 155 | 234 | 253 |
| 150 | | | | | | | | 68.6 | 140 | 139 | 200 | 222 |
| 140 | | | | | | | | 62.7 | 124 | 130 | 169 | 189 |
| 130 | | | | | | | | 52.5 | 109 | 126 | 149 | 163 |
| 120 | | | | | | | | 41.2 | 95.4 | 118 | 133 | 152 |
| 110 | | | | | | | | | 46.0 | 49.3 | 25.3 | 39.5 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 14 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | 0 | 0 | 0 | 1 | S1 | 1 | 1 | A1 | 1 | 0 |
| HMIN | 105 | 108 | 105 | 107 | 106 | 107 | 118 | 210 | 211 | 248 | 280 | 259 |
| SCAT | 54.0 | 54.2 | 45.6 | 40.6 | 43.4 | 56.4 | 43.2 | 43.1 | 41.4 | 55.5 | 40.7 | 41.8 |
| HMAXF | 285 | 311 | 303 | 279 | 272 | 269 | 282 | 300 | 305 | 366 | 375 | 349 |
| SHMAX | 908 | 1134 | 1254 | 1148 | 996 | 665 | 433 | 256 | 155 | 160 | 130 | 130 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | | 231 | |
| 370 | | | | | | | | | | 215 | 230 | |
| 360 | | | | | | | | | | 215 | 223 | |
| 350 | | | | | | | | | | 211 | 210 | 226 |
| 340 | | | | | | | | | | 204 | 188 | 223 |
| 330 | | | | | | | | | | 193 | 158 | 214 |
| 320 | | 1168 | | | | | | | | 179 | 125 | 198 |
| 310 | | 1168 | 1547 | | | | | | 271 | 159 | 89.3 | 177 |
| 300 | | 1157 | 1545 | | | | | 467 | 270 | 135 | 54.7 | 145 |
| 290 | 999 | 1126 | 1516 | | | | 648 | 461 | 262 | 109 | 30.0 | 118 |
| 280 | 997 | 1073 | 1450 | 1776 | 1554 | | 647 | 443 | 246 | 80.4 | | 80.8 |
| 270 | 981 | 1005 | 1346 | 1753 | 1553 | 878 | 635 | 413 | 222 | 53.8 | | 42.2 |
| 260 | 947 | 911 | 1206 | 1676 | 1526 | 872 | 605 | 367 | 191 | 32.6 | | 12.4 |
| 250 | 895 | 804 | 1029 | 1546 | 1457 | 853 | 558 | 303 | 153 | 12.4 | | |
| 240 | 827 | 693 | 840 | 1348 | 1349 | 818 | 496 | 209 | 108 | | | |
| 230 | 736 | 592 | 671 | 1083 | 1175 | 775 | 414 | 107 | 62.1 | | | |
| 220 | 630 | 501 | 535 | 786 | 920 | 708 | 323 | 43.2 | 30.4 | | | |
| 210 | 533 | 427 | 431 | 524 | 632 | 616 | 234 | 3.1 | | | | |
| 200 | 446 | 374 | 365 | 370 | 410 | 487 | 166 | | | | | |
| 190 | 378 | 338 | 322 | 302 | 296 | 313 | 116 | | | | | |
| 180 | 331 | 312 | 292 | 262 | 238 | 210 | 82.8 | | | | | |
| 170 | 299 | 290 | 268 | 232 | 203 | 157 | 61.8 | | | | | |
| 160 | 270 | 266 | 248 | 202 | 172 | 126 | 48.6 | | | | | |
| 150 | 241 | 238 | 227 | 173 | 145 | 105 | 42.3 | | | | | |
| 140 | 205 | 204 | 197 | 155 | 123 | 87.8 | 38.5 | | | | | |
| 130 | 172 | 169 | 165 | 137 | 113 | 77.8 | 32.3 | | | | | |
| 120 | 158 | 157 | 150 | 125 | 108 | 70.7 | 19.7 | | | | | |
| 110 | 94.9 | 54.6 | 75.5 | 49.2 | 68.7 | 31.3 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 15 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | 0 | 0 | 1 | 1 | A1 | 0 | 0 | 0 | 1 |
| HMIN | 249 | 247 | 227 | 219 | 214 | 246 | 251 | 108 | 104 | 107 | 108 | 105 |
| SCAT | 41.5 | 34.2 | 27.2 | 20.4 | 55.4 | 53.2 | 69.3 | 34.5 | 41.2 | 39.8 | 34.4 | 44.6 |
| HMAXF | 336 | 315 | 281 | 259 | 307 | 343 | 358 | 242 | 247 | 259 | 261 | 290 |
| SHMAX | 120 | 112 | 93 | 60 | 78 | 70 | 98 | 264 | 397 | 562 | 693 | 950 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | 123 | | | | | |
| 350 | | | | | | 103 | 123 | | | | | |
| 340 | 214 | | | | | 103 | 121 | | | | | |
| 330 | 213 | | | | | 102 | 118 | | | | | |
| 320 | 207 | 254 | | | | 98.4 | 114 | | | | | |
| 310 | 194 | 253 | | | 116 | 93.3 | 109 | | | | | |
| 300 | 174 | 242 | | | 115 | 86.4 | 101 | | | | | |
| 290 | 147 | 219 | 271 | | 113 | 77.3 | 88.7 | | | | | 1115 |
| 280 | 115 | 181 | 271 | | 109 | 65.9 | 73.7 | | | | | 1102 |
| 270 | 77.2 | 132 | 260 | | 103 | 51.6 | 53.1 | | | | 1041 | 1062 |
| 260 | 41.8 | 67.3 | 230 | 227 | 95.0 | 34.2 | 28.4 | | | 765 | 1041 | 992 |
| 250 | 12.4 | 23.7 | 174 | 215 | 84.1 | 17.8 | | 463 | 567 | 755 | 1013 | 893 |
| 240 | | | 78.6 | 174 | 69.3 | | | 462 | 563 | 722 | 938 | 777 |
| 230 | | | 25.1 | 96.3 | 48.9 | | | 449 | 542 | 666 | 830 | 661 |
| 220 | | | | 21.8 | 22.5 | | | 416 | 505 | 583 | 683 | 553 |
| 210 | | | | | | | | 363 | 452 | 489 | 535 | 462 |
| 200 | | | | | | | | 286 | 385 | 402 | 419 | 399 |
| 190 | | | | | | | | 205 | 311 | 333 | 340 | 355 |
| 180 | | | | | | | | 145 | 246 | 282 | 294 | 322 |
| 170 | | | | | | | | 109 | 195 | 241 | 263 | 292 |
| 160 | | | | | | | | 87.0 | 156 | 207 | 233 | 262 |
| 150 | | | | | | | | 72.3 | 130 | 180 | 204 | 230 |
| 140 | | | | | | | | 63.0 | 114 | 153 | 176 | 196 |
| 130 | | | | | | | | 59.7 | 98.5 | 131 | 155 | 168 |
| 120 | | | | | | | | 44.9 | 90.9 | 120 | 141 | 153 |
| 110 | | | | | | | | 25.3 | 67.2 | 80.3 | 73.8 | 127 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 15 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 1 | A1 | 1 | A0 | S0 | A0 | A0 | A0 | A0 | 0 |
| HMIN | 109 | 107 | 108 | 106 | 108 | 107 | 100 | 199 | 198 | 207 | 309 | 289 |
| SCAT | 35.2 | 44.7 | 46.1 | 35.0 | 42.4 | 36.4 | 39.9 | 45.6 | 56.0 | 56.8 | 42.8 | 38.3 |
| HMAXF | 281 | 280 | 289 | 271 | 276 | 267 | 265 | 302 | 328 | 348 | 392 | 362 |
| SHMAX | 933 | 918 | 991 | 877 | 838 | 606 | 402 | 220 | 167 | 147 | 99 | 102 |
| KM | | | | | | | | | | | | |
| 400 | | | | | | | | | | | 182 | |
| 390 | | | | | | | | | | | 182 | |
| 380 | | | | | | | | | | | 178 | |
| 370 | | | | | | | | | | | 170 | 204 |
| 360 | | | | | | | | | | | 157 | 204 |
| 350 | | | | | | | | | | 176 | 137 | 199 |
| 340 | | | | | | | | | | 175 | 109 | 186 |
| 330 | | | | | | | | | 214 | 171 | 70.1 | 167 |
| 320 | | | | | | | | | 213 | 165 | 39.0 | 140 |
| 310 | | | | | | | | 340 | 208 | 156 | 12.4 | 103 |
| 300 | | | | | | | | 340 | 201 | 144 | | 59.6 |
| 290 | 1360 | | 1217 | | | | | 334 | 189 | 129 | | 12.4 |
| 280 | 1359 | 1240 | 1205 | 1372 | 1163 | | | 320 | 174 | 112 | | |
| 270 | 1325 | 1225 | 1164 | 1372 | 1157 | 1031 | 651 | 297 | 153 | 94.3 | | |
| 260 | 1237 | 1179 | 1092 | 1339 | 1122 | 1023 | 649 | 268 | 130 | 78.0 | | |
| 250 | 1089 | 1104 | 996 | 1245 | 1051 | 978 | 629 | 232 | 107 | 63.0 | | |
| 240 | 900 | 990 | 868 | 1105 | 954 | 895 | 588 | 192 | 84.2 | 49.9 | | |
| 230 | 698 | 820 | 721 | 920 | 825 | 771 | 527 | 149 | 64.5 | 38.2 | | |
| 220 | 533 | 641 | 583 | 698 | 679 | 610 | 444 | 101 | 47.3 | 26.8 | | |
| 210 | 428 | 469 | 474 | 516 | 526 | 437 | 345 | 56.3 | 31.4 | 12.4 | | |
| 200 | 364 | 370 | 395 | 387 | 397 | 293 | 251 | 12.4 | 12.4 | | | |
| 190 | 325 | 319 | 338 | 316 | 313 | 202 | 172 | | | | | |
| 180 | 299 | 286 | 299 | 273 | 258 | 151 | 113 | | | | | |
| 170 | 274 | 254 | 270 | 243 | 220 | 120 | 76.7 | | | | | |
| 160 | 248 | 222 | 243 | 220 | 191 | 98.3 | 55.6 | | | | | |
| 150 | 215 | 191 | 205 | 197 | 166 | 85.7 | 43.4 | | | | | |
| 140 | 185 | 166 | 170 | 167 | 143 | 73.9 | 37.2 | | | | | |
| 130 | 163 | 155 | 156 | 141 | 121 | 65.7 | 34.0 | | | | | |
| 120 | 152 | 149 | 149 | 132 | 111 | 58.7 | 32.3 | | | | | |
| 110 | 39.4 | 46.6 | 56.4 | 98.9 | 43.9 | 42.3 | 29.2 | | | | | |
| 100 | | | | | | | 12.4 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 16 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A0 | A0 | 0 | 0 |
| HMIN | 207 | 238 | 228 | 223 | 217 | 236 | 198 | 111 | 108 | 109 | 109 | 107 |
| SCAT | 45.3 | 31.7 | 30.3 | 35.6 | 29.4 | 50.3 | 54.2 | 41.1 | 37.9 | 34.5 | 39.5 | 45.1 |
| HMAXF | 323 | 313 | 290 | 287 | 272 | 325 | 314 | 249 | 253 | 245 | 257 | 274 |
| SHMAX | 142 | 99 | 94 | 96 | 56 | 65 | 78 | 244 | 369 | 430 | 559 | 765 |
| KM | | | | | | | | | | | | |
| 330 | 214 | | | | | 103 | | | | | | |
| 320 | 213 | 222 | | | | 102 | 99.9 | | | | | |
| 310 | 209 | 221 | | | | 100 | 99.7 | | | | | |
| 300 | 199 | 213 | | | | 96.1 | 98.2 | | | | | |
| 290 | 185 | 193 | 234 | 221 | | 89.9 | 95.0 | | | | | |
| 280 | 162 | 164 | 228 | 218 | 149 | 81.5 | 89.8 | | | | | 936 |
| 270 | 135 | 126 | 209 | 208 | 149 | 70.2 | 83.4 | | | | | 934 |
| 260 | 108 | 76.9 | 179 | 188 | 143 | 55.6 | 75.1 | | 567 | | 779 | 912 |
| 250 | 84.4 | 39.9 | 135 | 154 | 129 | 38.4 | 65.8 | 374 | 566 | 678 | 772 | 868 |
| 240 | 65.2 | 12.4 | 66.2 | 105 | 103 | 17.8 | 56.2 | 370 | 550 | 675 | 742 | 799 |
| 230 | 48.9 | | 17.8 | 40.4 | 62.5 | | 46.9 | 355 | 513 | 646 | 685 | 702 |
| 220 | 34.2 | | | | 20.7 | | 37.7 | 329 | 457 | 593 | 604 | 597 |
| 210 | 16.2 | | | | | | 27.8 | 289 | 373 | 496 | 494 | 496 |
| 200 | | | | | | | 12.4 | 237 | 291 | 387 | 392 | 407 |
| 190 | | | | | | | | 181 | 223 | 305 | 323 | 348 |
| 180 | | | | | | | | 134 | 172 | 251 | 280 | 309 |
| 170 | | | | | | | | 99.9 | 133 | 214 | 249 | 280 |
| 160 | | | | | | | | 80.1 | 109 | 181 | 220 | 252 |
| 150 | | | | | | | | 70.3 | 99.9 | 154 | 191 | 223 |
| 140 | | | | | | | | 60.3 | 94.7 | 135 | 161 | 194 |
| 130 | | | | | | | | 51.9 | 91.8 | 123 | 147 | 170 |
| 120 | | | | | | | | 42.7 | 87.3 | 114 | 132 | 157 |
| 110 | | | | | | | | | 38.8 | 26.1 | 30.3 | 57.5 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 16 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | 0 | 0 | 0 | S0 | 0 | 0 | 0 | 0 | A0 |
| HMIN | 110 | 106 | 107 | 105 | 105 | 110 | | 198 | 209 | 261 | 267 | 227 |
| SCAT | 45.3 | 45.4 | 37.6 | 49.5 | 34.7 | 53.0 | | 38.3 | 46.6 | 45.0 | 54.0 | 43.1 |
| HMAXF | 277 | 297 | 282 | 291 | 262 | 277 | | 306 | 289 | 354 | 376 | 347 |
| SHMAX | 727 | 932 | 909 | 1064 | 764 | 740 | | 203 | 134 | 93 | 106 | 102 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | | 151 | |
| 370 | | | | | | | | | | | 151 | |
| 360 | | | | | | | | | | 153 | 148 | |
| 350 | | | | | | | | | | 153 | 143 | 148 |
| 340 | | | | | | | | | | 150 | 135 | 147 |
| 330 | | | | | | | | | | 142 | 123 | 142 |
| 320 | | | | | | | | | | 131 | 107 | 133 |
| 310 | | | | | | | | 348 | | 117 | 87.9 | 121 |
| 300 | | 1051 | | 1341 | | | | 346 | | 97.7 | 67.5 | 105 |
| 290 | | 1045 | 1298 | 1341 | | | | 332 | 235 | 74.9 | 47.9 | 88.6 |
| 280 | 858 | 1015 | 1298 | 1323 | | 1022 | | 307 | 233 | 50.1 | 29.6 | 73.6 |
| 270 | 852 | 954 | 1267 | 1278 | 1335 | 1018 | | 272 | 225 | 27.8 | 12.4 | 59.8 |
| 260 | 827 | 882 | 1190 | 1204 | 1333 | 996 | | 230 | 212 | | | 47.4 |
| 250 | 779 | 791 | 1067 | 1102 | 1292 | 957 | | 183 | 194 | | | 35.8 |
| 240 | 713 | 680 | 902 | 957 | 1194 | 906 | | 134 | 165 | | | 25.1 |
| 230 | 629 | 569 | 707 | 783 | 1034 | 814 | | 89.4 | 125 | | | 12.4 |
| 220 | 536 | 476 | 537 | 609 | 799 | 679 | | 57.4 | 73.5 | | | |
| 210 | 453 | 404 | 413 | 471 | 554 | 505 | | 33.9 | 21.8 | | | |
| 200 | 386 | 353 | 338 | 367 | 378 | 349 | | 12.4 | | | | |
| 190 | 340 | 320 | 299 | 303 | 279 | 239 | | | | | | |
| 180 | 305 | 298 | 274 | 265 | 228 | 176 | | | | | | |
| 170 | 278 | 281 | 256 | 238 | 194 | 140 | | | | | | |
| 160 | 251 | 262 | 236 | 211 | 165 | 114 | | | | | | |
| 150 | 218 | 232 | 204 | 182 | 140 | 94.8 | | | | | | |
| 140 | 187 | 191 | 174 | 150 | 122 | 81.9 | | | | | | |
| 130 | 170 | 163 | 151 | 133 | 107 | 76.8 | | | | | | |
| 120 | 151 | 153 | 140 | 126 | 101 | 66.0 | | | | | | |
| 110 | 13.0 | 120 | 68.7 | 103 | 71.8 | 13.0 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 17 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | 0 | A0 | A0 | 0 | 0 | S0 | A0 | A0 | 0 | A0 | 0 |
| HMIN | 286 | 256 | 235 | 217 | 219 | 263 | 198 | 109 | 107 | 106 | 104 | 108 |
| SCAT | 59.2 | 37.7 | 23.2 | 33.8 | 46.0 | 68.0 | 39.8 | 30.7 | 32.0 | 41.8 | 40.3 | 39.2 |
| HMAXF | 393 | 331 | 287 | 271 | 292 | 379 | 290 | 229 | 236 | 243 | 258 | 267 |
| SHMAX | 116 | 93 | 73 | 83 | 63 | 98 | 78 | 207 | 315 | 402 | 547 | 659 |
| KM | | | | | | | | | | | | |
| 400 | 160 | | | | | | | | | | | |
| 390 | 160 | | | | | | | | | | | |
| 380 | 159 | | | | | 118 | | | | | | |
| 370 | 154 | | | | | 118 | | | | | | |
| 360 | 148 | | | | | 116 | | | | | | |
| 350 | 139 | | | | | 113 | | | | | | |
| 340 | 126 | 188 | | | | 108 | | | | | | |
| 330 | 107 | 188 | | | | 103 | | | | | | |
| 320 | 85.3 | 184 | | | | 95.5 | | | | | | |
| 310 | 62.2 | 173 | | | | 84.9 | | | | | | |
| 300 | 39.8 | 156 | | | 120 | 71.8 | 132 | | | | | |
| 290 | 18.4 | 127 | 226 | | 120 | 56.6 | 132 | | | | | |
| 280 | | 94.1 | 220 | 223 | 118 | 39.8 | 130 | | | | | |
| 270 | | 57.1 | 195 | 223 | 113 | 22.7 | 123 | | | | | 898 |
| 260 | | 23.6 | 150 | 217 | 105 | | 113 | | | | 730 | 892 |
| 250 | | | 88.2 | 203 | 91.4 | | 99.4 | | | 541 | 723 | 857 |
| 240 | | | 31.7 | 168 | 70.5 | | 83.4 | | 517 | 541 | 693 | 796 |
| 230 | | | | 86.2 | 41.8 | | 66.5 | 390 | 513 | 528 | 641 | 699 |
| 220 | | | | 24.0 | 12.4 | | 49.8 | 383 | 486 | 501 | 557 | 575 |
| 210 | | | | | | | 32.1 | 354 | 434 | 458 | 456 | 455 |
| 200 | | | | | | | 12.4 | 302 | 362 | 397 | 371 | 362 |
| 190 | | | | | | | | 231 | 291 | 335 | 315 | 310 |
| 180 | | | | | | | | 167 | 234 | 283 | 278 | 280 |
| 170 | | | | | | | | 121 | 191 | 240 | 249 | 245 |
| 160 | | | | | | | | 90.4 | 156 | 207 | 222 | 217 |
| 150 | | | | | | | | 72.8 | 126 | 182 | 196 | 190 |
| 140 | | | | | | | | 64.2 | 109 | 154 | 164 | 171 |
| 130 | | | | | | | | 60.6 | 93.9 | 125 | 149 | 161 |
| 120 | | | | | | | | 55.5 | 85.9 | 115 | 140 | 151 |
| 110 | | | | | | | | 23.8 | 42.3 | 84.2 | 106 | 55.2 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 17 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | A0 | A0 | A0 | A0 | A2 | S2 | 2 | 0 | 0 | A0 | 1 |
| HMIN | 107 | | | | | | 100 | 200 | 216 | 218 | 250 | 232 |
| SCAT | 38.6 | | | | | | 37.6 | 49.1 | 42.1 | 45.8 | 52.8 | 54.4 |
| HMAXF | 270 | | | | | | 260 | 300 | 306 | 322 | 353 | 340 |
| SHMAX | 660 | | | | | | 396 | 196 | 139 | 116 | 118 | 110 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | | | 174 | |
| 350 | | | | | | | | | | | 174 | |
| 340 | | | | | | | | | | | 172 | 153 |
| 330 | | | | | | | | | | 178 | 166 | 152 |
| 320 | | | | | | | | | | 178 | 157 | 148 |
| 310 | | | | | | | | | 246 | 175 | 145 | 141 |
| 300 | | | | | | | | 292 | 245 | 167 | 127 | 133 |
| 290 | | | | | | | | 289 | 237 | 156 | 106 | 121 |
| 280 | 886 | | | | | | | 280 | 222 | 141 | 79.1 | 105 |
| 270 | 886 | | | | | | | 264 | 201 | 122 | 52.0 | 86.6 |
| 260 | 870 | | | | | | 747 | 244 | 171 | 100 | 28.2 | 66.4 |
| 250 | 824 | | | | | | 734 | 217 | 132 | 76.2 | 1.9 | 46.1 |
| 240 | 749 | | | | | | 695 | 186 | 87.6 | 53.2 | | 25.2 |
| 230 | 634 | | | | | | 628 | 148 | 50.4 | 32.2 | | |
| 220 | 511 | | | | | | 526 | 110 | 22.0 | 12.4 | | |
| 210 | 402 | | | | | | 350 | 64.7 | | | | |
| 200 | 337 | | | | | | 227 | 12.4 | | | | |
| 190 | 300 | | | | | | 113 | | | | | |
| 180 | 278 | | | | | | 65.7 | | | | | |
| 170 | 257 | | | | | | 45.0 | | | | | |
| 160 | 214 | | | | | | 36.2 | | | | | |
| 150 | 185 | | | | | | 31.3 | | | | | |
| 140 | 170 | | | | | | 28.3 | | | | | |
| 130 | 162 | | | | | | 26.8 | | | | | |
| 120 | 157 | | | | | | 25.8 | | | | | |
| 110 | 82.9 | | | | | | 23.4 | | | | | |
| 100 | | | | | | | 12.4 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 18 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| HMIN | 278 | 268 | 233 | 232 | 239 | 230 | 198 | 110 | 108 | 103 | 105 | 105 |
| SCAT | 40.9 | 40.2 | 40.1 | 38.7 | 40.8 | 51.4 | 40.3 | 31.0 | 36.2 | 37.1 | 41.7 | 37.6 |
| HMAXF | 367 | 349 | 324 | 316 | 318 | 336 | 286 | 231 | 242 | 248 | 268 | 284 |
| SHMAX | 85 | 91 | 103 | 88 | 88 | 99 | 77 | 186 | 325 | 461 | 622 | 858 |
| KM | | | | | | | | | | | | |
| 370 | 150 | | | | | | | | | | | |
| 360 | 150 | | | | | | | | | | | |
| 350 | 144 | 168 | | | | | | | | | | |
| 340 | 135 | 166 | | | | 142 | | | | | | |
| 330 | 121 | 159 | 184 | | | 142 | | | | | | |
| 320 | 102 | 146 | 184 | 171 | 170 | 139 | | | | | | |
| 310 | 79.6 | 129 | 179 | 170 | 168 | 133 | | | | | | |
| 300 | 56.3 | 106 | 167 | 164 | 162 | 125 | | | | | | |
| 290 | 32.6 | 79.2 | 152 | 152 | 151 | 114 | 136 | | | | | 1275 |
| 280 | 12.4 | 47.2 | 129 | 134 | 132 | 99.4 | 135 | | | | | 1272 |
| 270 | | 16.5 | 101 | 106 | 106 | 82.8 | 130 | | | | 768 | 1232 |
| 260 | | | 70.1 | 74.3 | 72.0 | 65.0 | 121 | | | | 761 | 1151 |
| 250 | | | 43.7 | 46.3 | 37.9 | 46.0 | 108 | | 494 | 648 | 733 | 1006 |
| 240 | | | 23.1 | 24.4 | 4.7 | 27.2 | 90.2 | 342 | 493 | 639 | 683 | 784 |
| 230 | | | | | | 2.4 | 70.3 | 341 | 480 | 608 | 610 | 541 |
| 220 | | | | | | | 50.9 | 332 | 447 | 554 | 526 | 420 |
| 210 | | | | | | | 32.5 | 304 | 359 | 476 | 446 | 350 |
| 200 | | | | | | | 12.4 | 258 | 336 | 396 | 378 | 308 |
| 190 | | | | | | | | 203 | 272 | 326 | 327 | 281 |
| 180 | | | | | | | | 145 | 215 | 275 | 290 | 262 |
| 170 | | | | | | | | 105 | 172 | 236 | 261 | 242 |
| 160 | | | | | | | | 81.3 | 137 | 203 | 232 | 218 |
| 150 | | | | | | | | 69.9 | 113 | 174 | 203 | 161 |
| 140 | | | | | | | | 61.1 | 102 | 149 | 172 | 141 |
| 130 | | | | | | | | 53.0 | 96.9 | 133 | 150 | 133 |
| 120 | | | | | | | | 47.3 | 92.8 | 125 | 143 | 128 |
| 110 | | | | | | | | 13.0 | 52.7 | 97.8 | 106 | 122 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 18 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | A1 | A1 | A1 | A1 | A1 | A1 | A2 | A2 | A2 | A2 |
| HMIN | 105 | 106 | | | | | | | | | | 246 |
| SCAT | 43.6 | 42.6 | | | | | | | | | | 46.5 |
| HMAXF | 284 | 288 | | | | | | | | | | 349 |
| SHMAX | 869 | 948 | | | | | | | | | | 120 |
| KM | | | | | | | | | | | | |
| 350 | | | | | | | | | | | | 185 |
| 340 | | | | | | | | | | | | 183 |
| 330 | | | | | | | | | | | | 177 |
| 320 | | | | | | | | | | | | 167 |
| 310 | | | | | | | | | | | | 152 |
| 300 | | | | | | | | | | | | 132 |
| 290 | 1055 | 1184 | | | | | | | | | | 108 |
| 280 | 1053 | 1173 | | | | | | | | | | 84.8 |
| 270 | 1028 | 1130 | | | | | | | | | | 63.0 |
| 260 | 969 | 1052 | | | | | | | | | | 41.9 |
| 250 | 896 | 947 | | | | | | | | | | 18.8 |
| 240 | 799 | 819 | | | | | | | | | | |
| 230 | 685 | 680 | | | | | | | | | | |
| 220 | 565 | 550 | | | | | | | | | | |
| 210 | 457 | 442 | | | | | | | | | | |
| 200 | 379 | 371 | | | | | | | | | | |
| 190 | 328 | 323 | | | | | | | | | | |
| 180 | 296 | 293 | | | | | | | | | | |
| 170 | 270 | 268 | | | | | | | | | | |
| 160 | 243 | 243 | | | | | | | | | | |
| 150 | 214 | 213 | | | | | | | | | | |
| 140 | 189 | 183 | | | | | | | | | | |
| 130 | 170 | 165 | | | | | | | | | | |
| 120 | 159 | 157 | | | | | | | | | | |
| 110 | 126 | 109 | | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 M — 19 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | A1 | 1 | 1 | 1 | A1 | 1 | A1 | A1 | A1 | A0 |
| HMIN | 259 | 250 | 232 | 219 | 204 | 198 | 208 | 109 | 109 | | | 107 |
| SCAT | 38.1 | 34.8 | 32.2 | 35.0 | 55.2 | 54.1 | 42.3 | 34.2 | 34.1 | | | 46.2 |
| HMAXF | 355 | 330 | 307 | 287 | 277 | 322 | 298 | 235 | 240 | | | 285 |
| SHMAX | 104 | 99 | 93 | 110 | 107 | 75 | 58 | 204 | 317 | | | 842 |
| KM | | | | | | | | | | | | |
| 360 | 186 | | | | | | | | | | | |
| 350 | 185 | | | | | | | | | | | |
| 340 | 179 | 188 | | | | | | | | | | |
| 330 | 166 | 188 | | | | 91.1 | | | | | | |
| 320 | 147 | 185 | | | | 91.0 | | | | | | |
| 310 | 124 | 176 | 206 | | | 90.1 | | | | | | |
| 300 | 96.6 | 161 | 203 | | | 87.9 | 95.4 | | | | | |
| 290 | 68.4 | 138 | 191 | 254 | | 83.8 | 94.6 | | | | | 1013 |
| 280 | 45.3 | 109 | 169 | 252 | 193 | 79.3 | 91.1 | | | | | 1010 |
| 270 | 26.4 | 76.7 | 138 | 240 | 192 | 73.3 | 84.9 | | | | | 987 |
| 260 | 3.1 | 40.2 | 98.4 | 218 | 189 | 66.0 | 77.1 | | | | | 939 |
| 250 | | 3.1 | 60.1 | 176 | 182 | 57.6 | 67.8 | | | | | 871 |
| 240 | | | 26.9 | 115 | 173 | 48.8 | 56.2 | 345 | 480 | | | 772 |
| 230 | | | | 52.8 | 153 | 40.0 | 43.2 | 343 | 470 | | | 659 |
| 220 | | | | 12.4 | 108 | 30.9 | 29.5 | 328 | 437 | | | 544 |
| 210 | | | | | 35.4 | 21.8 | 12.4 | 299 | 391 | | | 443 |
| 200 | | | | | | 6.2 | | 259 | 337 | | | 369 |
| 190 | | | | | | | | 208 | 279 | | | 321 |
| 180 | | | | | | | | 157 | 227 | | | 289 |
| 170 | | | | | | | | 112 | 185 | | | 264 |
| 160 | | | | | | | | 85.8 | 154 | | | 238 |
| 150 | | | | | | | | 73.7 | 133 | | | 209 |
| 140 | | | | | | | | 62.0 | 116 | | | 175 |
| 130 | | | | | | | | 51.0 | 92.6 | | | 154 |
| 120 | | | | | | | | 44.4 | 81.3 | | | 145 |
| 110 | | | | | | | | 22.0 | 25.3 | | | 83.2 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 M — 19 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | A0 | A1 | A1 | A1 | 2 | A2 | 2 | 5 | 5 | 5 | 5 |
| HMIN | 109 | | 109 | 110 | 110 | 107 | | 211 | 238 | 268 | 257 | 286 |
| SCAT | 38.6 | | 41.5 | 41.6 | 39.2 | 44.5 | | 41.3 | 41.9 | 42.1 | 43.3 | 34.9 |
| HMAXF | 284 | | 289 | 292 | 271 | 262 | | 294 | 348 | 371 | 360 | 380 |
| SHMAX | 829 | | 901 | 993 | 776 | 558 | | 215 | 168 | 183 | 204 | 163 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | 296 | | 309 |
| 370 | | | | | | | | | | 296 | | 303 |
| 360 | | | | | | | | | | 291 | 340 | 283 |
| 350 | | | | | | | | | 263 | 278 | 336 | 253 |
| 340 | | | | | | | | | 260 | 256 | 323 | 215 |
| 330 | | | | | | | | | 250 | 228 | 300 | 170 |
| 320 | | | | | | | | | 232 | 196 | 268 | 123 |
| 310 | | | | | | | | | 210 | 157 | 225 | 77.5 |
| 300 | | | | 1385 | | | | 403 | 182 | 118 | 176 | 44.0 |
| 290 | 1070 | | 1184 | 1384 | | | | 402 | 151 | 77.9 | 123 | 18.8 |
| 280 | 1067 | | 1170 | 1355 | 1240 | | | 392 | 119 | 40.2 | 76.3 | |
| 270 | 1035 | | 1121 | 1275 | 1240 | 882 | | 370 | 88.5 | 12.4 | 40.8 | |
| 260 | 963 | | 1037 | 1176 | 1215 | 881 | | 334 | 59.3 | | 16.2 | |
| 250 | 866 | | 916 | 1035 | 1151 | 866 | | 282 | 34.5 | | | |
| 240 | 740 | | 765 | 848 | 1046 | 828 | | 216 | 12.4 | | | |
| 230 | 615 | | 614 | 643 | 883 | 770 | | 138 | | | | |
| 220 | 505 | | 482 | 483 | 659 | 675 | | 63.7 | | | | |
| 210 | 409 | | 385 | 368 | 468 | 533 | | | | | | |
| 200 | 345 | | 326 | 304 | 336 | 368 | | | | | | |
| 190 | 309 | | 290 | 263 | 259 | 232 | | | | | | |
| 180 | 285 | | 265 | 235 | 214 | 156 | | | | | | |
| 170 | 264 | | 242 | 209 | 181 | 122 | | | | | | |
| 160 | 241 | | 214 | 182 | 150 | 97.4 | | | | | | |
| 150 | 216 | | 184 | 152 | 124 | 81.2 | | | | | | |
| 140 | 190 | | 161 | 134 | 110 | 71.8 | | | | | | |
| 130 | 170 | | 146 | 127 | 102 | 66.2 | | | | | | |
| 120 | 153 | | 138 | 112 | 98.6 | 63.4 | | | | | | |
| 110 | 37.2 | | 59.7 | 12.4 | 13.0 | 39.5 | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 M — 20 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 5 | 5 | 4 | 4 | 4 | 2 | 2 | A2 | 0 | 0 | 0 | A1 |
| HMIN | 297 | 289 | 228 | 212 | 268 | 291 | 200 | 109 | 107 | 108 | 107 | 109 |
| SCAT | 30.9 | 31.3 | 29.4 | 21.7 | 99.8 | 41.3 | 63.6 | 42.0 | 39.2 | 38.6 | 49.3 | 31.7 |
| HMAXF | 396 | 349 | 290 | 252 | 426 | 389 | 307 | 248 | 249 | 263 | 295 | 275 |
| SHMAX | 164 | 168 | 167 | 99 | 196 | 136 | 141 | 239 | 411 | 579 | 945 | 973 |
| KM | | | | | | | | | | | | |
| 430 | | | | | 170 | | | | | | | |
| 420 | | | | | 170 | | | | | | | |
| 410 | | | | | 169 | | | | | | | |
| 400 | 299 | | | | 167 | | | | | | | |
| 390 | 296 | | | | 165 | 228 | | | | | | |
| 380 | 274 | | | | 161 | 225 | | | | | | |
| 370 | 248 | | | | 156 | 214 | | | | | | |
| 360 | 218 | | | | 151 | 199 | | | | | | |
| 350 | 184 | 363 | | | 145 | 178 | | | | | | |
| 340 | 148 | 354 | | | 138 | 152 | | | | | | |
| 330 | 110 | 326 | | | 129 | 123 | | | | | | |
| 320 | 69.5 | 286 | | | 115 | 90.4 | | | | | | |
| 310 | 39.9 | 232 | | | 97.1 | 56.2 | 185 | | | | | |
| 300 | 16.2 | 167 | | | 76.2 | 29.8 | 184 | | | | 1070 | |
| 290 | | 103 | 442 | | 52.6 | | 182 | | | | 1068 | |
| 280 | | 46.7 | 430 | | 31.8 | | 176 | | | | 1046 | 1576 |
| 270 | | 12.4 | 394 | | 12.4 | | 169 | | | 808 | 1003 | 1566 |
| 260 | | | 326 | 385 | | | 159 | | | 807 | 938 | 1472 |
| 250 | | | 220 | 384 | | | 145 | 383 | 636 | 786 | 852 | 1336 |
| 240 | | | 90.1 | 354 | | | 125 | 380 | 628 | 734 | 749 | 1147 |
| 230 | | | 20.5 | 263 | | | 102 | 366 | 600 | 665 | 638 | 893 |
| 220 | | | | 85.7 | | | 73.2 | 343 | 552 | 573 | 535 | 667 |
| 210 | | | | | | | 41.1 | 299 | 465 | 466 | 450 | 483 |
| 200 | | | | | | | 3.1 | 241 | 361 | 375 | 380 | 381 |
| 190 | | | | | | | | 175 | 277 | 307 | 326 | 327 |
| 180 | | | | | | | | 111 | 216 | 257 | 288 | 289 |
| 170 | | | | | | | | 80.2 | 174 | 220 | 257 | 254 |
| 160 | | | | | | | | 65.1 | 143 | 189 | 227 | 221 |
| 150 | | | | | | | | 56.9 | 121 | 159 | 197 | 193 |
| 140 | | | | | | | | 53.3 | 104 | 138 | 168 | 170 |
| 130 | | | | | | | | 49.8 | 97.3 | 126 | 147 | 156 |
| 120 | | | | | | | | 42.5 | 91.4 | 120 | 138 | 145 |
| 110 | | | | | | | | 22.0 | 54.4 | 79.1 | 109 | 33.3 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 M — 20 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 1 | 1 | A1 | A0 | A0 | A0 | 2 | A2 | A2 | A1 |
| HMIN | 107 | 108 | 107 | 106 | | | | 199 | 210 | 266 | 268 | 231 |
| SCAT | 48.4 | 48.3 | 41.1 | 41.9 | | | | 53.4 | 45.9 | 41.1 | 42.1 | 43.4 |
| HMAXF | 282 | 291 | 287 | 278 | | | | 290 | 319 | 371 | 362 | 323 |
| SHMAX | 1076 | 943 | 1002 | 923 | | | | 237 | 160 | 130 | 146 | 146 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | 211 | | |
| 370 | | | | | | | | | | 211 | 258 | |
| 360 | | | | | | | | | | 207 | 258 | |
| 350 | | | | | | | | | | 197 | 253 | |
| 340 | | | | | | | | | | 181 | 241 | |
| 330 | | | | | | | | | | 160 | 221 | 259 |
| 320 | | | | | | | | | 242 | 135 | 191 | 259 |
| 310 | | | | | | | | | 239 | 109 | 152 | 253 |
| 300 | | 1080 | | | | | | | 231 | 83.1 | 107 | 241 |
| 290 | 1347 | 1080 | 1329 | | | | | 373 | 218 | 57.0 | 69.3 | 221 |
| 280 | 1347 | 1067 | 1319 | 1287 | | | | 370 | 198 | 35.4 | 40.0 | 191 |
| 270 | 1326 | 1031 | 1272 | 1276 | | | | 360 | 174 | 17.8 | 12.4 | 151 |
| 260 | 1277 | 967 | 1183 | 1230 | | | | 344 | 146 | | | 103 |
| 250 | 1146 | 891 | 1060 | 1148 | | | | 320 | 117 | | | 60.8 |
| 240 | 1092 | 802 | 907 | 1027 | | | | 287 | 84.9 | | | 30.0 |
| 230 | 965 | 703 | 736 | 863 | | | | 236 | 55.0 | | | |
| 220 | 804 | 599 | 579 | 685 | | | | 172 | 30.0 | | | |
| 210 | 631 | 505 | 451 | 527 | | | | 90.9 | | | | |
| 200 | 484 | 418 | 373 | 408 | | | | 12.4 | | | | |
| 190 | 377 | 345 | 324 | 327 | | | | | | | | |
| 180 | 317 | 298 | 291 | 275 | | | | | | | | |
| 170 | 279 | 264 | 261 | 240 | | | | | | | | |
| 160 | 249 | 231 | 236 | 213 | | | | | | | | |
| 150 | 222 | 196 | 210 | 186 | | | | | | | | |
| 140 | 194 | 171 | 177 | 159 | | | | | | | | |
| 130 | 166 | 160 | 156 | 138 | | | | | | | | |
| 120 | 152 | 145 | 146 | 127 | | | | | | | | |
| 110 | 90.5 | 39.5 | 100 | 95.8 | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 21 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 1 | 1 | 1 | 2 | 2 | A2 | A2 | A2 | A2 | A2 |
| HMIN | 246 | 239 | 230 | 199 | 201 | 276 | 236 | 112 | | 110 | 108 | 108 |
| SCAT | 39.6 | 32.5 | 38.6 | 28.2 | 37.7 | 59.3 | 46.2 | 41.2 | | 32.0 | 43.1 | 44.8 |
| HMAXF | 331 | 302 | 299 | 253 | 260 | 375 | 316 | 251 | | 266 | 270 | 284 |
| SHMAX | 123 | 97 | 118 | 81 | 44 | 72 | 66 | 260 | | 586 | 779 | 903 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | 102 | | | | | | |
| 370 | | | | | | 102 | | | | | | |
| 360 | | | | | | 100 | | | | | | |
| 350 | | | | | | 97.2 | | | | | | |
| 340 | 226 | | | | | 93.0 | | | | | | |
| 330 | 226 | | | | | 87.2 | | | | | | |
| 320 | 221 | | | | | 78.3 | 116 | | | | | |
| 310 | 210 | 225 | | | | 66.3 | 116 | | | | | |
| 300 | 191 | 224 | 253 | | | 51.3 | 113 | | | | | |
| 290 | 165 | 217 | 250 | | | 34.6 | 107 | | | | | 1131 |
| 280 | 132 | 199 | 238 | | | 17.8 | 99.0 | | | | | 1129 |
| 270 | 95.0 | 169 | 218 | | | | 86.9 | | | 882 | 1075 | 1105 |
| 260 | 54.4 | 129 | 183 | 235 | 101 | | 70.5 | 411 | | 873 | 1061 | 1053 |
| 250 | 22.6 | 76.3 | 129 | 234 | 99.5 | | 46.6 | 411 | | 824 | 1018 | 973 |
| 240 | | 23.2 | 59.0 | 222 | 94.2 | | 18.8 | 404 | | 732 | 949 | 865 |
| 230 | | | | 194 | 85.2 | | | 385 | | 622 | 838 | 735 |
| 220 | | | | 133 | 68.5 | | | 356 | | 507 | 685 | 600 |
| 210 | | | | 56.6 | 38.7 | | | 305 | | 403 | 523 | 476 |
| 200 | | | | 12.4 | | | | 237 | | 329 | 402 | 387 |
| 190 | | | | | | | | 174 | | 277 | 326 | 332 |
| 180 | | | | | | | | 127 | | 238 | 284 | 296 |
| 170 | | | | | | | | 93.8 | | 209 | 251 | 269 |
| 160 | | | | | | | | 74.2 | | 183 | 222 | 241 |
| 150 | | | | | | | | 62.6 | | 161 | 195 | 213 |
| 140 | | | | | | | | 55.9 | | 141 | 172 | 183 |
| 130 | | | | | | | | 49.4 | | 125 | 152 | 160 |
| 120 | | | | | | | | 42.6 | | 108 | 138 | 150 |
| 110 | | | | | | | | | | 13.0 | 69.4 | 38.8 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 21 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | A2 | A2 | A2 | A2 | A3 | A3 | 3 | 2 | A2 | A2 | A2 |
| HMIN | 108 | 109 | 108 | | | | | 200 | 201 | 259 | 240 | 215 |
| SCAT | 39.2 | 45.3 | 42.0 | | | | | 34.5 | 48.6 | 37.2 | 36.0 | 33.4 |
| HMAXF | 285 | 286 | 286 | | | | | 274 | 315 | 350 | 322 | 277 |
| SHMAX | 948 | 1089 | 1054 | | | | | 263 | 173 | 136 | 147 | 110 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | | 247 | | |
| 350 | | | | | | | | | | 247 | | |
| 340 | | | | | | | | | | 243 | | |
| 330 | | | | | | | | | | 229 | 296 | |
| 320 | | | | | | | | | 259 | 206 | 296 | |
| 310 | | | | | | | | | 258 | 179 | 288 | |
| 300 | | | | | | | | | 253 | 146 | 267 | |
| 290 | 1240 | 1457 | 1424 | | | | | | 242 | 108 | 238 | |
| 280 | 1235 | 1451 | 1416 | | | | | 567 | 226 | 69.7 | 200 | 274 |
| 270 | 1196 | 1413 | 1372 | | | | | 565 | 204 | 35.6 | 137 | 271 |
| 260 | 1112 | 1340 | 1288 | | | | | 544 | 176 | 4.7 | 79.2 | 256 |
| 250 | 997 | 1229 | 1161 | | | | | 500 | 143 | | 39.5 | 228 |
| 240 | 854 | 1058 | 1003 | | | | | 431 | 106 | | 3.9 | 175 |
| 230 | 709 | 863 | 820 | | | | | 332 | 68.7 | | | 91.6 |
| 220 | 576 | 667 | 639 | | | | | 211 | 39.1 | | | 30.1 |
| 210 | 465 | 495 | 487 | | | | | 98.9 | 21.1 | | | |
| 200 | 385 | 382 | 379 | | | | | 12.4 | | | | |
| 190 | 334 | 322 | 316 | | | | | | | | | |
| 180 | 301 | 286 | 278 | | | | | | | | | |
| 170 | 276 | 263 | 252 | | | | | | | | | |
| 160 | 251 | 242 | 229 | | | | | | | | | |
| 150 | 223 | 218 | 206 | | | | | | | | | |
| 140 | 196 | 187 | 178 | | | | | | | | | |
| 130 | 171 | 162 | 156 | | | | | | | | | |
| 120 | 159 | 152 | 146 | | | | | | | | | |
| 110 | 54.2 | 59.7 | 54.6 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 22 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | A2 | A1 | A1 | A1 | A2 | A2 | 2 | 2 | A2 | 2 | A2 |
| HMIN | | | 245 | 217 | 221 | 241 | 209 | 116 | 106 | 108 | 105 | |
| SCAT | | | 36.9 | 29.4 | 40.6 | 41.2 | 44.6 | 34.2 | 34.5 | 39.3 | 43.3 | |
| HMAXF | | | 314 | 279 | 309 | 332 | 279 | 239 | 231 | 249 | 267 | |
| SHMAX | | | 84 | 76 | 83 | 85 | 73 | 230 | 306 | 450 | 647 | |
| KM | | | | | | | | | | | | |
| 340 | | | | | | 148 | | | | | | |
| 330 | | | | | | 148 | | | | | | |
| 320 | | | 179 | | | 145 | | | | | | |
| 310 | | | 179 | | 150 | 138 | | | | | | |
| 300 | | | 173 | | 148 | 126 | | | | | | |
| 290 | | | 161 | | 140 | 110 | | | | | | |
| 280 | | | 141 | 197 | 130 | 89.0 | 141 | | | | | |
| 270 | | | 111 | 192 | 114 | 65.8 | 140 | | | | 850 | |
| 260 | | | 67.8 | 177 | 91.5 | 43.8 | 135 | | | | 845 | |
| 250 | | | 27.7 | 147 | 66.9 | 25.1 | 126 | | | 619 | 819 | |
| 240 | | | | 100 | 44.3 | | 113 | 430 | 512 | 611 | 771 | |
| 230 | | | | 51.7 | 25.3 | | 91.0 | 422 | 512 | 584 | 695 | |
| 220 | | | | 19.3 | | | 58.3 | 396 | 500 | 537 | 592 | |
| 210 | | | | | | | 12.4 | 351 | 467 | 473 | 480 | |
| 200 | | | | | | | | 277 | 411 | 402 | 385 | |
| 190 | | | | | | | | 194 | 333 | 339 | 317 | |
| 180 | | | | | | | | 133 | 255 | 287 | 275 | |
| 170 | | | | | | | | 90.9 | 198 | 242 | 245 | |
| 160 | | | | | | | | 70.7 | 159 | 207 | 216 | |
| 150 | | | | | | | | 59.0 | 130 | 179 | 185 | |
| 140 | | | | | | | | 51.1 | 107 | 151 | 158 | |
| 130 | | | | | | | | 47.7 | 90.8 | 125 | 144 | |
| 120 | | | | | | | | 31.0 | 83.3 | 112 | 137 | |
| 110 | | | | | | | | | 46.0 | 35.6 | 69.2 | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 22 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A2 | A2 | A0 | A0 | A0 | A1 | A1 | 1 | 0 | 0 | A0 | A1 |
| HMIN | 108 | 105 | 108 | | | | | 199 | 219 | 243 | 248 | 222 |
| SCAT | 45.8 | 47.8 | 43.6 | | | | | 49.0 | 51.9 | 44.6 | 37.2 | 41.9 |
| HMAXF | 284 | 294 | 293 | | | | | 291 | 324 | 336 | 336 | 305 |
| SHMAX | 834 | 1002 | 1131 | | | | | 184 | 130 | 115 | 121 | 112 |
| KM | | | | | | | | | | | | |
| 340 | | | | | | | | | | 196 | 234 | |
| 330 | | | | | | | | | 184 | 195 | 233 | |
| 320 | | | | | | | | | 184 | 189 | 223 | |
| 310 | | | | | | | | | 181 | 179 | 206 | 204 |
| 300 | | 1163 | 1554 | | | | | 296 | 175 | 164 | 178 | 203 |
| 290 | 1031 | 1160 | 1552 | | | | | 296 | 165 | 141 | 141 | 198 |
| 280 | 1030 | 1137 | 1521 | | | | | 292 | 152 | 112 | 100 | 186 |
| 270 | 1008 | 1088 | 1449 | | | | | 282 | 135 | 79.7 | 62.4 | 169 |
| 260 | 961 | 1012 | 1338 | | | | | 267 | 116 | 48.6 | 34.6 | 143 |
| 250 | 893 | 914 | 1166 | | | | | 244 | 93.4 | 24.3 | 12.4 | 111 |
| 240 | 794 | 792 | 939 | | | | | 210 | 69.2 | | | 72.2 |
| 230 | 672 | 667 | 723 | | | | | 169 | 42.3 | | | 34.9 |
| 220 | 540 | 555 | 535 | | | | | 119 | 12.4 | | | |
| 210 | 430 | 452 | 408 | | | | | 64.0 | | | | |
| 200 | 353 | 380 | 334 | | | | | 12.4 | | | | |
| 190 | 307 | 330 | 291 | | | | | | | | | |
| 180 | 276 | 295 | 260 | | | | | | | | | |
| 170 | 249 | 268 | 236 | | | | | | | | | |
| 160 | 222 | 246 | 216 | | | | | | | | | |
| 150 | 192 | 214 | 193 | | | | | | | | | |
| 140 | 168 | 186 | 168 | | | | | | | | | |
| 130 | 153 | 163 | 149 | | | | | | | | | |
| 120 | 145 | 152 | 139 | | | | | | | | | |
| 110 | 81.1 | 119 | 61.1 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 23 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A1 | A1 | A1 | 1 | A1 | 1 | 1 | H1 | A0 | A0 | 0 | A2 |
| HMIN | 218 | 247 | 237 | 219 | 222 | 232 | 223 | 109 | 109 | 106 | 108 | 107 |
| SCAT | 57.8 | 41.4 | 43.7 | 35.6 | 33.7 | 52.3 | 39.0 | 38.7 | 32.6 | 40.1 | 42.7 | 44.9 |
| HMAXF | 333 | 328 | 321 | 281 | 281 | 329 | 301 | 241 | 248 | 259 | 274 | 279 |
| SHMAX | 119 | 99 | 113 | 88 | 75 | 93 | 61 | 231 | 332 | 496 | 681 | 852 |
| KM | | | | | | | | | | | | |
| 340 | 156 | | | | | | | | | | | |
| 330 | 156 | 186 | 206 | | | 135 | | | | | | |
| 320 | 154 | 184 | 206 | | | 134 | | | | | | |
| 310 | 150 | 177 | 203 | | | 131 | 116 | | | | | |
| 300 | 144 | 164 | 194 | | | 125 | 116 | | | | | |
| 290 | 135 | 145 | 181 | 206 | 186 | 116 | 113 | | | | | |
| 280 | 123 | 117 | 159 | 206 | 186 | 105 | 107 | | | | 846 | 1075 |
| 270 | 108 | 83.3 | 128 | 201 | 181 | 91.6 | 97.0 | | | | 844 | 1065 |
| 260 | 90.4 | 46.5 | 85.2 | 188 | 169 | 75.2 | 82.8 | | | 681 | 822 | 1029 |
| 250 | 72.1 | 19.3 | 44.6 | 165 | 145 | 55.1 | 65.4 | 368 | 541 | 674 | 775 | 965 |
| 240 | 50.9 | | 16.2 | 125 | 101 | 31.5 | 44.0 | 368 | 532 | 645 | 709 | 872 |
| 230 | 31.4 | | | 65.4 | 43.6 | | 23.1 | 361 | 498 | 596 | 622 | 750 |
| 220 | 12.4 | | | 12.4 | | | | 341 | 439 | 522 | 530 | 619 |
| 210 | | | | | | | | 309 | 364 | 435 | 437 | 496 |
| 200 | | | | | | | | 261 | 285 | 361 | 365 | 399 |
| 190 | | | | | | | | 209 | 220 | 301 | 316 | 337 |
| 180 | | | | | | | | 159 | 169 | 251 | 281 | 296 |
| 170 | | | | | | | | 114 | 131 | 208 | 251 | 268 |
| 160 | | | | | | | | 85.6 | 108 | 170 | 222 | 243 |
| 150 | | | | | | | | 72.5 | 98.5 | 140 | 191 | 217 |
| 140 | | | | | | | | 66.8 | 93.8 | 128 | 161 | 188 |
| 130 | | | | | | | | 53.8 | 91.0 | 122 | 144 | 160 |
| 120 | | | | | | | | 47.5 | 82.2 | 116 | 137 | 146 |
| 110 | | | | | | | | 23.7 | 24.2 | 47.4 | 80.5 | 89.6 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 23 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 2 | 2 | 2 | A2 | A2 | A3 | A3 | 3 | A2 | 2 | 2 | 3 |
| HMIN | 106 | 105 | 106 | | | | | 209 | 218 | 257 | 269 | 217 |
| SCAT | 41.5 | 42.0 | 47.6 | | | | | 42.3 | 57.1 | 53.6 | 37.6 | 31.0 |
| HMAXF | 294 | 292 | 284 | | | | | 288 | 318 | 381 | 347 | 284 |
| SHMAX | 989 | 1081 | 1094 | | | | | 122 | 101 | 117 | 98 | 90 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | | | | 155 | | |
| 380 | | | | | | | | | | 155 | | |
| 370 | | | | | | | | | | 154 | | |
| 360 | | | | | | | | | | 149 | | |
| 350 | | | | | | | | | | 142 | 195 | |
| 340 | | | | | | | | | | 133 | 193 | |
| 330 | | | | | | | | | | 120 | 185 | |
| 320 | | | | | | | | | 145 | 103 | 171 | |
| 310 | | | | | | | | | 144 | 85.7 | 147 | |
| 300 | 1234 | 1464 | | | | | | | 141 | 68.2 | 116 | |
| 290 | 1231 | 1462 | 1477 | | | | | 234 | 136 | 52.4 | 79.7 | 215 |
| 280 | 1199 | 1432 | 1474 | | | | | 232 | 129 | 38.4 | 41.8 | 215 |
| 270 | 1130 | 1360 | 1444 | | | | | 223 | 119 | 26.2 | 12.4 | 205 |
| 260 | 1025 | 1246 | 1381 | | | | | 208 | 104 | 12.4 | | 184 |
| 250 | 883 | 1091 | 1285 | | | | | 184 | 85.0 | | | 149 |
| 240 | 741 | 893 | 1143 | | | | | 147 | 59.5 | | | 101 |
| 230 | 613 | 680 | 944 | | | | | 90.4 | 35.5 | | | 55.5 |
| 220 | 506 | 511 | 722 | | | | | 46.8 | 12.4 | | | 19.9 |
| 210 | 421 | 399 | 519 | | | | | 12.4 | | | | |
| 200 | 360 | 337 | 377 | | | | | | | | | |
| 190 | 318 | 299 | 307 | | | | | | | | | |
| 180 | 288 | 274 | 268 | | | | | | | | | |
| 170 | 265 | 249 | 240 | | | | | | | | | |
| 160 | 242 | 221 | 213 | | | | | | | | | |
| 150 | 216 | 191 | 189 | | | | | | | | | |
| 140 | 178 | 170 | 169 | | | | | | | | | |
| 130 | 159 | 158 | 154 | | | | | | | | | |
| 120 | 151 | 151 | 145 | | | | | | | | | |
| 110 | 79.6 | 74.8 | 84.4 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 24 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 3 | 3 | 2 | S2 | A2 | A2 | S2 | 2 | A1 | 1 | A1 | A0 |
| HMIN | 212 | 225 | 251 | 217 | 218 | 228 | 197 | 114 | 109 | 109 | 111 | |
| SCAT | 35.0 | 33.3 | 32.5 | 47.7 | 37.4 | 48.2 | 40.8 | 31.1 | 36.5 | 26.1 | 49.9 | |
| HMAXF | 284 | 296 | 317 | 335 | 312 | 325 | 295 | 236 | 247 | 248 | 274 | |
| SHMAX | 81 | 75 | 74 | 110 | 85 | 88 | 78 | 203 | 363 | 485 | 738 | |
| KM | | | | | | | | | | | | |
| 340 | | | | 160 | | | | | | | | |
| 330 | | | | 160 | | 140 | | | | | | |
| 320 | | | 171 | 157 | 155 | 139 | | | | | | |
| 310 | | | 169 | 150 | 155 | 136 | | | | | | |
| 300 | | 170 | 160 | 139 | 152 | 130 | 130 | | | | | |
| 290 | 179 | 169 | 142 | 123 | 142 | 122 | 129 | | | | | |
| 280 | 179 | 161 | 115 | 104 | 127 | 108 | 126 | | | | 936 | |
| 270 | 172 | 145 | 79.0 | 84.3 | 108 | 89.7 | 118 | | | | 935 | |
| 260 | 159 | 118 | 38.7 | 66.4 | 84.6 | 69.5 | 106 | | | | 917 | |
| 250 | 134 | 85.5 | | 50.5 | 60.5 | 48.0 | 90.7 | | 541 | 831 | 880 | |
| 240 | 99.1 | 46.7 | | 36.3 | 41.3 | 28.7 | 74.6 | 374 | 536 | 809 | 829 | |
| 230 | 59.2 | 20.7 | | 23.8 | 26.4 | 7.7 | 58.3 | 371 | 512 | 725 | 743 | |
| 220 | 28.1 | | | 9.0 | 7.9 | | 42.1 | 351 | 466 | 613 | 620 | |
| 210 | | | | | | | 27.6 | 311 | 405 | 494 | 493 | |
| 200 | | | | | | | 12.4 | 256 | 339 | 388 | 380 | |
| 190 | | | | | | | | 197 | 275 | 308 | 312 | |
| 180 | | | | | | | | 140 | 221 | 257 | 270 | |
| 170 | | | | | | | | 100 | 180 | 221 | 240 | |
| 160 | | | | | | | | 76.7 | 149 | 190 | 211 | |
| 150 | | | | | | | | 66.3 | 126 | 161 | 183 | |
| 140 | | | | | | | | 55.3 | 107 | 136 | 154 | |
| 130 | | | | | | | | 44.1 | 92.9 | 120 | 140 | |
| 120 | | | | | | | | 37.6 | 82.9 | 111 | 125 | |
| 110 | | | | | | | | | 25.3 | 33.1 | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO — 60 W — 24 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A0 | 0 | A1 | 1 | A1 | A0 | S0 | 0 | 1 | 1 | 1 | A1 |
| HMIN | 109 | 109 | | 108 | 111 | | 100 | 202 | 229 | 217 | 248 | 207 |
| SCAT | 39.2 | 45.4 | | 48.3 | 51.7 | | 40.4 | 39.2 | 41.4 | 49.8 | 51.3 | 54.1 |
| HMAXF | 266 | 290 | | 273 | 281 | | 267 | 301 | 307 | 311 | 355 | 319 |
| SHMAX | 765 | 939 | | 793 | 767 | | 333 | 197 | 166 | 150 | 161 | 163 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | | | | 236 | |
| 350 | | | | | | | | | | | 236 | |
| 340 | | | | | | | | | | | 231 | |
| 330 | | | | | | | | | | | 222 | |
| 320 | | | | | | | | | | 246 | 209 | 242 |
| 310 | | | | | | | | 338 | 325 | 246 | 190 | 240 |
| 300 | | | | | | | | 338 | 323 | 243 | 165 | 235 |
| 290 | | 1131 | | | 954 | | | 331 | 312 | 235 | 135 | 225 |
| 280 | | 1117 | | 1022 | 954 | | | 313 | 292 | 222 | 103 | 212 |
| 270 | 1080 | 1076 | | 1021 | 943 | | 541 | 284 | 260 | 204 | 70.4 | 187 |
| 260 | 1074 | 1004 | | 1004 | 915 | | 538 | 248 | 209 | 172 | 37.3 | 152 |
| 250 | 1035 | 914 | | 965 | 867 | | 519 | 207 | 135 | 132 | 12.4 | 115 |
| 240 | 960 | 799 | | 903 | 805 | | 483 | 157 | 65.6 | 83.7 | | 80.3 |
| 230 | 849 | 675 | | 822 | 722 | | 431 | 107 | 12.4 | 43.3 | | 53.0 |
| 220 | 708 | 554 | | 714 | 623 | | 357 | 67.9 | | 16.2 | | 32.8 |
| 210 | 556 | 451 | | 587 | 513 | | 272 | 34.1 | | | | 15.3 |
| 200 | 433 | 374 | | 465 | 393 | | 187 | | | | | |
| 190 | 351 | 323 | | 355 | 294 | | 125 | | | | | |
| 180 | 301 | 288 | | 279 | 229 | | 84.1 | | | | | |
| 170 | 268 | 263 | | 234 | 189 | | 58.9 | | | | | |
| 160 | 239 | 240 | | 201 | 159 | | 43.4 | | | | | |
| 150 | 212 | 213 | | 169 | 136 | | 34.3 | | | | | |
| 140 | 184 | 182 | | 143 | 119 | | 29.2 | | | | | |
| 130 | 162 | 163 | | 128 | 106 | | 26.9 | | | | | |
| 120 | 151 | 152 | | 120 | 98.7 | | 25.7 | | | | | |
| 110 | 41.7 | 41.7 | | 55.9 | | | 23.0 | | | | | |
| 100 | | | | | | | 13.0 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 25 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | A1 | A1 | A1 | A1 | 1 | 1 | 1 | 2 | 2 | 2 | A3 |
| HMIN | 238 | 228 | 219 | 199 | | 247 | 209 | 109 | 106 | 109 | 108 | 107 |
| SCAT | 44.4 | 36.4 | 36.1 | 20.7 | | 45.0 | 38.8 | 34.8 | 32.3 | 32.1 | 44.3 | 45.2 |
| HMAXF | 325 | 307 | 292 | 255 | | 323 | 297 | 246 | 251 | 259 | 278 | 284 |
| SHMAX | 115 | 103 | 97 | 67 | | 57 | 56 | 203 | 418 | 595 | 817 | 917 |
| KM | | | | | | | | | | | | |
| 330 | 207 | | | | | 103 | | | | | | |
| 320 | 206 | | | | | 103 | | | | | | |
| 310 | 201 | 215 | | | | 101 | | | | | | |
| 300 | 191 | 214 | 212 | | | 96.0 | 99.9 | | | | | |
| 290 | 174 | 204 | 211 | | | 89.0 | 99.1 | | | | | 1173 |
| 280 | 147 | 186 | 206 | | | 78.0 | 95.2 | | | | 1070 | 1171 |
| 270 | 110 | 156 | 193 | | | 62.3 | 87.7 | | | | 1061 | 1145 |
| 260 | 73.1 | 115 | 168 | 214 | | 42.6 | 77.8 | | 681 | 980 | 1024 | 1090 |
| 250 | 39.9 | 71.2 | 130 | 210 | | 20.5 | 64.6 | 358 | 681 | 960 | 960 | 1009 |
| 240 | 12.4 | 37.7 | 81.0 | 185 | | | 50.2 | 355 | 660 | 891 | 869 | 880 |
| 230 | | 12.4 | 41.8 | 136 | | | 36.4 | 340 | 607 | 772 | 741 | 733 |
| 220 | | | 12.4 | 82.1 | | | 23.7 | 311 | 521 | 614 | 605 | 592 |
| 210 | | | | 41.8 | | | 4.7 | 263 | 416 | 462 | 481 | 474 |
| 200 | | | | 12.4 | | | | 198 | 324 | 355 | 385 | 386 |
| 190 | | | | | | | | 134 | 255 | 288 | 319 | 325 |
| 180 | | | | | | | | 90.5 | 206 | 244 | 276 | 284 |
| 170 | | | | | | | | 68.5 | 171 | 207 | 240 | 251 |
| 160 | | | | | | | | 56.6 | 143 | 173 | 207 | 219 |
| 150 | | | | | | | | 51.4 | 121 | 145 | 174 | 184 |
| 140 | | | | | | | | 48.9 | 102 | 128 | 150 | 162 |
| 130 | | | | | | | | 47.3 | 88.9 | 118 | 140 | 150 |
| 120 | | | | | | | | 40.9 | 82.9 | 113 | 129 | 143 |
| 110 | | | | | | | | 17.0 | 47.4 | 59.9 | 54.6 | 90.5 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 25 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 3 | A3 | A3 | A3 | A3 | A0 | A0 | A0 | 3 | 3 | 3 | 4 |
| HMIN | 108 | | | | | | | 206 | 199 | 217 | 268 | 261 |
| SCAT | 49.6 | | | | | | | 38.8 | 42.5 | 71.2 | 52.0 | 43.3 |
| HMAXF | 293 | | | | | | | 284 | 292 | 362 | 374 | 360 |
| SHMAX | 926 | | | | | | | 170 | 127 | 150 | 126 | 113 |
| KM | | | | | | | | | | | | |
| 380 | | | | | | | | | | | 185 | |
| 370 | | | | | | | | | | 160 | 185 | |
| 360 | | | | | | | | | | 160 | 182 | 185 |
| 350 | | | | | | | | | | 159 | 175 | 183 |
| 340 | | | | | | | | | | 156 | 166 | 176 |
| 330 | | | | | | | | | | 152 | 152 | 163 |
| 320 | | | | | | | | | | 146 | 132 | 146 |
| 310 | | | | | | | | | | 138 | 107 | 124 |
| 300 | 1126 | | | | | | | | 215 | 128 | 81.0 | 99.5 |
| 290 | 1125 | | | | | | | 342 | 215 | 115 | 53.8 | 73.1 |
| 280 | 1108 | | | | | | | 341 | 211 | 101 | 31.8 | 49.4 |
| 270 | 1067 | | | | | | | 331 | 201 | 85.4 | 12.4 | 26.5 |
| 260 | 1003 | | | | | | | 311 | 184 | 69.1 | | |
| 250 | 917 | | | | | | | 276 | 161 | 53.8 | | |
| 240 | 805 | | | | | | | 226 | 133 | 39.8 | | |
| 230 | 664 | | | | | | | 158 | 102 | 26.9 | | |
| 220 | 521 | | | | | | | 74.9 | 71.2 | 12.4 | | |
| 210 | 406 | | | | | | | 27.8 | 40.4 | | | |
| 200 | 331 | | | | | | | | 12.4 | | | |
| 190 | 286 | | | | | | | | | | | |
| 180 | 249 | | | | | | | | | | | |
| 170 | 209 | | | | | | | | | | | |
| 160 | 181 | | | | | | | | | | | |
| 150 | 167 | | | | | | | | | | | |
| 140 | 158 | | | | | | | | | | | |
| 130 | 153 | | | | | | | | | | | |
| 120 | 144 | | | | | | | | | | | |
| 110 | 40.6 | | | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 26 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 4 | 4 | 5 | 5 | 5 | A3 | A3 | S3 | A3 | 3 | 3 | 3 |
| HMIN | 252 | 259 | 230 | 211 | 239 | 209 | 277 | 111 | | 108 | 105 | 108 |
| SCAT | 32.1 | 37.2 | 35.8 | 26.6 | 43.9 | 56.8 | 43.5 | 23.3 | | 42.7 | 36.8 | 37.4 |
| HMAXF | 339 | 342 | 308 | 263 | 315 | 291 | 358 | 242 | | 281 | 284 | 289 |
| SHMAX | 99 | 112 | 116 | 82 | 92 | 75 | 51 | 199 | | 712 | 840 | 1095 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | 93.2 | | | | | |
| 350 | | 217 | | | | | 92.5 | | | | | |
| 340 | 197 | 217 | | | | | 89.4 | | | | | |
| 330 | 193 | 212 | | | | | 83.7 | | | | | |
| 320 | 179 | 198 | | | 171 | | 75.4 | | | | | |
| 310 | 157 | 178 | 242 | | 171 | | 62.7 | | | | | |
| 300 | 131 | 149 | 239 | | 166 | 121 | 46.6 | | | | | |
| 290 | 103 | 114 | 227 | | 158 | 121 | 29.2 | | | 919 | 1152 | 1627 |
| 280 | 72.8 | 71.9 | 206 | | 145 | 120 | 12.4 | | | 919 | 1149 | 1604 |
| 270 | 45.4 | 39.0 | 173 | 246 | 124 | 117 | | | | 903 | 1111 | 1524 |
| 260 | 24.4 | 12.4 | 129 | 245 | 93.2 | 112 | | | | 861 | 1026 | 1385 |
| 250 | | | 78.5 | 231 | 57.3 | 105 | | 517 | | 793 | 919 | 1191 |
| 240 | | | 38.6 | 198 | 12.4 | 93.9 | | 516 | | 713 | 788 | 938 |
| 230 | | | 3.9 | 131 | | 75.0 | | 484 | | 617 | 649 | 717 |
| 220 | | | | 54.9 | | 48.7 | | 402 | | 513 | 524 | 534 |
| 210 | | | | | | 12.4 | | 251 | | 421 | 423 | 410 |
| 200 | | | | | | | | 112 | | 345 | 347 | 341 |
| 190 | | | | | | | | 63.5 | | 284 | 292 | 299 |
| 180 | | | | | | | | 55.6 | | 233 | 252 | 268 |
| 170 | | | | | | | | 51.3 | | 189 | 216 | 240 |
| 160 | | | | | | | | 48.6 | | 152 | 183 | 212 |
| 150 | | | | | | | | 46.8 | | 131 | 160 | 179 |
| 140 | | | | | | | | 45.7 | | 119 | 146 | 155 |
| 130 | | | | | | | | 43.1 | | 112 | 137 | 143 |
| 120 | | | | | | | | 36.8 | | 108 | 132 | 137 |
| 110 | | | | | | | | | | 39.5 | 104 | 46.0 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 26 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 3 | 3 | 5 | A5 | A5 | A5 | A5 | 5 | 4 | 4 | A4 | A5 |
| HMIN | 108 | 106 | 105 | | | | | 247 | 234 | 237 | 226 | 213 |
| SCAT | 43.4 | 49.8 | 44.5 | | | | | 49.6 | 46.2 | 38.4 | 48.6 | 37.8 |
| HMAXF | 287 | 291 | 295 | | | | | 352 | 350 | 329 | 346 | 290 |
| SHMAX | 1268 | 1282 | 1177 | | | | | 342 | 290 | 237 | 272 | 236 |
| KM | | | | | | | | | | | | |
| 360 | | | | | | | | 539 | 442 | | | |
| 350 | | | | | | | | 539 | 442 | | 392 | |
| 340 | | | | | | | | 531 | 437 | | 391 | |
| 330 | | | | | | | | 513 | 421 | 430 | 382 | |
| 320 | | | | | | | | 485 | 394 | 424 | 365 | |
| 310 | | | | | | | | 442 | 359 | 404 | 340 | |
| 300 | | 1650 | 1519 | | | | | 375 | 312 | 368 | 307 | |
| 290 | 1860 | 1650 | 1514 | | | | | 293 | 255 | 320 | 266 | 512 |
| 280 | 1846 | 1629 | 1475 | | | | | 212 | 197 | 264 | 219 | 504 |
| 270 | 1785 | 1575 | 1392 | | | | | 130 | 142 | 201 | 171 | 478 |
| 260 | 1678 | 1488 | 1284 | | | | | 65.3 | 89.7 | 131 | 124 | 434 |
| 250 | 1508 | 1357 | 1147 | | | | | 21.6 | 49.5 | 70.6 | 78.6 | 353 |
| 240 | 1263 | 1172 | 973 | | | | | | 22.4 | 23.7 | 42.8 | 221 |
| 230 | 958 | 945 | 776 | | | | | | | | 18.4 | 104 |
| 220 | 687 | 738 | 605 | | | | | | | | | 36.6 |
| 210 | 475 | 569 | 478 | | | | | | | | | |
| 200 | 358 | 441 | 389 | | | | | | | | | |
| 190 | 300 | 354 | 324 | | | | | | | | | |
| 180 | 264 | 300 | 276 | | | | | | | | | |
| 170 | 235 | 263 | 237 | | | | | | | | | |
| 160 | 197 | 231 | 203 | | | | | | | | | |
| 150 | 168 | 200 | 170 | | | | | | | | | |
| 140 | 153 | 170 | 148 | | | | | | | | | |
| 130 | 144 | 148 | 136 | | | | | | | | | |
| 120 | 139 | 139 | 129 | | | | | | | | | |
| 110 | 88.9 | 95.0 | 124 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 27 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G,KP | 5 | A5 | 4 | 4 | 4 | 4 | A4 | 4 | 3 | 3 | 3 | 3 |
| HMIN | 221 | 278 | 289 | 222 | 200 | 219 | 218 | 119 | 112 | 106 | 107 | 109 |
| SCAT | 49.3 | 46.9 | 40.5 | 24.7 | 58.9 | 44.4 | 48.2 | 36.9 | 52.5 | 54.3 | 55.9 | 42.1 |
| HMAXF | 327 | 308 | 402 | 279 | 297 | 319 | 322 | 249 | 277 | 287 | 287 | 290 |
| SHMAX | 192 | 196 | 187 | 120 | 140 | 78 | 80 | 225 | 478 | 713 | 897 | 926 |
| KM | | | | | | | | | | | | |
| 410 | | | 209 | | | | | | | | | |
| 400 | | | 269 | | | | | | | | | |
| 390 | | 296 | 242 | | | | | | | | | |
| 380 | | 294 | 274 | | | | | | | | | |
| 370 | | 285 | 253 | | | | | | | | | |
| 360 | | 269 | 225 | | | | | | | | | |
| 350 | | 248 | 192 | | | | | | | | | |
| 340 | | 221 | 153 | | | | | | | | | |
| 330 | 295 | 190 | 112 | | | | 121 | | | | | |
| 320 | 293 | 152 | 75.6 | | | 124 | 121 | | | | | |
| 310 | 285 | 105 | 48.7 | | | 123 | 119 | | | | | |
| 300 | 271 | 64.2 | 28.8 | | 205 | 118 | 115 | | | | | |
| 290 | 252 | 37.3 | 7.4 | | 204 | 111 | 108 | | | 812 | 1027 | 1179 |
| 280 | 227 | 16.4 | | 354 | 201 | 100 | 97.4 | | 588 | 808 | 1022 | 1162 |
| 270 | 193 | | | 341 | 194 | 86.2 | 83.0 | | 585 | 792 | 1002 | 1113 |
| 260 | 147 | | | 300 | 185 | 70.1 | 66.2 | | 573 | 761 | 965 | 1032 |
| 250 | 96.0 | | | 224 | 173 | 53.0 | 50.7 | 390 | 549 | 719 | 914 | 917 |
| 240 | 55.3 | | | 131 | 155 | 37.6 | 36.5 | 385 | 516 | 659 | 840 | 782 |
| 230 | 28.8 | | | 47.6 | 123 | 24.2 | 24.9 | 365 | 466 | 582 | 741 | 634 |
| 220 | | | | | PC.7 | 4.3 | 8.4 | 331 | 404 | 494 | 619 | 506 |
| 210 | | | | | 4C.6 | | | 266 | 337 | 408 | 501 | 406 |
| 200 | | | | | 3.9 | | | 200 | 272 | 328 | 399 | 348 |
| 190 | | | | | | | | 146 | 216 | 269 | 326 | 309 |
| 180 | | | | | | | | 104 | 171 | 229 | 276 | 281 |
| 170 | | | | | | | | 77.9 | 139 | 196 | 239 | 255 |
| 160 | | | | | | | | 63.6 | 115 | 167 | 209 | 227 |
| 150 | | | | | | | | 57.2 | 97.7 | 143 | 181 | 196 |
| 140 | | | | | | | | 54.2 | 85.6 | 125 | 158 | 170 |
| 130 | | | | | | | | 40.0 | 80.0 | 115 | 138 | 150 |
| 120 | | | | | | | | 18.8 | 54.2 | 109 | 128 | 139 |
| 110 | | | | | | | | | | 78.8 | 103 | 57.6 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 27 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G,KP | A3 | 3 | A4 | A4 | A4 | A5 | A5 | A5 | 2 | A2 | A2 | 2 |
| HMIN | | 108 | 108 | | | | | 200 | 218 | 246 | 299 | 276 |
| SCAT | | 42.0 | 42.4 | | | | | 28.0 | 57.1 | 50.3 | 40.4 | 37.5 |
| HMAXF | | 241 | 284 | | | | | 253 | 335 | 375 | 382 | 365 |
| SHMAX | | 1199 | 1039 | | | | | 167 | 133 | 121 | 103 | 103 |
| KM | | | | | | | | | | | | |
| 390 | | | | | | | | | | | 189 | |
| 380 | | | | | | | | | | 163 | 189 | |
| 370 | | | | | | | | | | 162 | 185 | 192 |
| 360 | | | | | | | | | | 159 | 174 | 191 |
| 350 | | | | | | | | | | 152 | 160 | 184 |
| 340 | | | | | | | | | 170 | 142 | 138 | 170 |
| 330 | | | | | | | | | 170 | 129 | 111 | 151 |
| 320 | | | | | | | | | 168 | 112 | 78.9 | 126 |
| 310 | | | | | | | | | 162 | 93.6 | 41.5 | 95.8 |
| 300 | | 1696 | | | | | | | 154 | 76.5 | 12.4 | 63.2 |
| 290 | | 1696 | 1484 | | | | | | 144 | 60.7 | | 38.3 |
| 280 | | 1667 | 1480 | | | | | | 132 | 47.3 | | 18.1 |
| 270 | | 1590 | 1442 | | | | | | 118 | 35.4 | | |
| 260 | | 1468 | 1363 | | | | | 467 | 101 | 24.6 | | |
| 250 | | 1284 | 1243 | | | | | 466 | 83.7 | 12.4 | | |
| 240 | | 1041 | 1084 | | | | | 442 | 61.7 | | | |
| 230 | | 774 | 870 | | | | | 388 | 35.8 | | | |
| 220 | | 558 | 671 | | | | | 299 | 12.4 | | | |
| 210 | | 422 | 466 | | | | | 157 | | | | |
| 200 | | 345 | 341 | | | | | 12.4 | | | | |
| 190 | | 299 | 280 | | | | | | | | | |
| 180 | | 270 | 242 | | | | | | | | | |
| 170 | | 252 | 206 | | | | | | | | | |
| 160 | | 235 | 177 | | | | | | | | | |
| 150 | | 210 | 158 | | | | | | | | | |
| 140 | | 175 | 145 | | | | | | | | | |
| 130 | | 154 | 137 | | | | | | | | | |
| 120 | | 146 | 132 | | | | | | | | | |
| 110 | | 102 | 86.5 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 28 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G,KP | A2 | A2 | A5 | A5 | A5 | A6 | A6 | A6 | A8 | A8 | A8 | A8 |
| HMIN | 226 | 220 | 218 | 207 | | | 207 | 110 | 109 | 110 | | |
| SCAT | 29.7 | 30.3 | 33.8 | 35.8 | | | 42.4 | 37.7 | 51.9 | 47.1 | | |
| HMAXF | 295 | 297 | 288 | 274 | | | 297 | 264 | 237 | 307 | | |
| SHMAX | 77 | 82 | 82 | 67 | | | 80 | 266 | 531 | 1041 | | |
| KM | | | | | | | | | | | | |
| 310 | | | | | | | | | | 1234 | | |
| 300 | | 193 | | | | | 103 | | 607 | 1228 | | |
| 290 | 258 | 191 | 184 | | | | 102 | | 605 | 1154 | | |
| 280 | 256 | 162 | 182 | 148 | | | 98.3 | | 591 | 1129 | | |
| 270 | 242 | 166 | 171 | 147 | | | 91.8 | 381 | 564 | 1044 | | |
| 260 | 213 | 136 | 152 | 142 | | | 82.3 | 380 | 530 | 942 | | |
| 250 | 167 | 101 | 121 | 131 | | | 68.7 | 369 | 464 | 831 | | |
| 240 | 40.9 | 62.5 | 82.5 | 113 | | | 53.5 | 343 | 431 | 715 | | |
| 230 | 28.3 | 32.7 | 43.8 | 84.5 | | | 39.7 | 308 | 372 | 597 | | |
| 220 | | | 16.5 | 48.5 | | | 26.9 | 265 | 310 | 486 | | |
| 210 | | | | 19.3 | | | 12.4 | 220 | 253 | 394 | | |
| 200 | | | | | | | | 175 | 208 | 322 | | |
| 190 | | | | | | | | 138 | 170 | 265 | | |
| 180 | | | | | | | | 111 | 139 | 220 | | |
| 170 | | | | | | | | 91.0 | 113 | 184 | | |
| 160 | | | | | | | | 76.3 | 92.8 | 155 | | |
| 150 | | | | | | | | 64.9 | 82.8 | 132 | | |
| 140 | | | | | | | | 58.9 | 78.3 | 116 | | |
| 130 | | | | | | | | 54.9 | 76.2 | 107 | | |
| 120 | | | | | | | | 39.0 | 68.6 | 98.9 | | |
| 110 | | | | | | | | 12.4 | 22.2 | 13.0 | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 28 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G,KP | 8 | 8 | A7 | 9 | A9 | A7 | A7 | A7 | A6 | A6 | 6 | A5 |
| HMIN | 104 | 105 | 104 | 106 | 110 | | 100 | 200 | | 199 | 209 | 278 |
| SCAT | 93.6 | 42.0 | 42.5 | 72.1 | 91.4 | | 59.0 | 49.5 | | 58.0 | 31.4 | 59.0 |
| HMAXF | 359 | 307 | 291 | 320 | 465 | | 336 | 307 | | 328 | 269 | 418 |
| SHMAX | 1943 | 1727 | 1518 | 1253 | 2431 | | 1740 | 1051 | | 725 | 275 | 301 |
| KM | | | | | | | | | | | | |
| 470 | | | | | 1484 | | | | | | | |
| 460 | | | | | 1483 | | | | | | | |
| 450 | | | | | 1474 | | | | | | | |
| 440 | | | | | 1456 | | | | | | | |
| 430 | | | | | 1429 | | | | | | | |
| 420 | | | | | 1393 | | | | | | | 369 |
| 410 | | | | | 1339 | | | | | | | 367 |
| 400 | | | | | 1240 | | | | | | | 360 |
| 390 | | | | | 1234 | | | | | | | 348 |
| 380 | | | | | 1171 | | | | | | | 329 |
| 370 | | | | | 1105 | | | | | | | 307 |
| 360 | 1868 | | | | 1033 | | | | | | | 278 |
| 350 | 1854 | | | | 955 | | | | | | | 242 |
| 340 | 1809 | | | | 878 | | 1947 | | | | | 202 |
| 330 | 1730 | | | | 806 | | 1943 | | | 976 | | 160 |
| 320 | 1617 | | | 1217 | 742 | | 1913 | | | 971 | | 117 |
| 310 | 1487 | 2440 | | 1212 | 682 | | 1856 | 1491 | | 952 | | 81.4 |
| 300 | 1345 | 2425 | 2363 | 1195 | 629 | | 1762 | 1483 | | 919 | | 53.3 |
| 290 | 1199 | 2345 | 2362 | 1166 | 582 | | 1655 | 1447 | | 873 | | 32.5 |
| 280 | 1053 | 2197 | 2322 | 1117 | 538 | | 1529 | 1380 | | 806 | | 12.4 |
| 270 | 916 | 1984 | 2217 | 1069 | 497 | | 1382 | 1278 | | 706 | 714 | |
| 260 | 797 | 1706 | 2039 | 1013 | 458 | | 1224 | 1162 | | 591 | 700 | |
| 250 | 693 | 1388 | 1796 | 951 | 420 | | 1053 | 1027 | | 461 | 652 | |
| 240 | 604 | 1067 | 1422 | 874 | 383 | | 866 | 874 | | 319 | 565 | |
| 230 | 529 | 771 | 979 | 785 | 348 | | 653 | 709 | | 190 | 397 | |
| 220 | 466 | 535 | 663 | 685 | 313 | | 457 | 532 | | 101 | 154 | |
| 210 | 411 | 426 | 455 | 574 | 280 | | 300 | 305 | | 46.7 | 24.5 | |
| 200 | 363 | 355 | 345 | 454 | 247 | | 192 | 12.4 | | 12.4 | | |
| 190 | 322 | 307 | 285 | 352 | 215 | | 131 | | | | | |
| 180 | 287 | 271 | 246 | 279 | 187 | | 87.9 | | | | | |
| 170 | 257 | 244 | 213 | 230 | 161 | | 62.2 | | | | | |
| 160 | 229 | 220 | 183 | 197 | 141 | | 47.8 | | | | | |
| 150 | 194 | 197 | 156 | 172 | 124 | | 38.7 | | | | | |
| 140 | 159 | 160 | 138 | 149 | 109 | | 34.0 | | | | | |
| 130 | 140 | 144 | 129 | 130 | 98.4 | | 32.0 | | | | | |
| 120 | 132 | 138 | 124 | 121 | 87.8 | | 30.3 | | | | | |
| 110 | 41.7 | 84.9 | 33.0 | 66.8 | 13.0 | | 27.3 | | | | | |
| 100 | | | | | | | 16.3 | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 29 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A5 | A5 | A6 | A6 | A6 | A4 | A4 | A4 | A2 | A2 | 2 | A1 |
| HMIN | 280 | 199 | 239 | | | | | | | 107 | 106 | |
| SCAT | 45.2 | 25.4 | 21.4 | | | | | | | 39.9 | 41.1 | |
| HMAXF | 377 | 259 | 277 | | | | | | | 304 | 287 | |
| SHMAX | 213 | 174 | 100 | | | | | | | 1157 | 1272 | |
| KM | | | | | | | | | | | | |
| 380 | 354 | | | | | | | | | | | |
| 370 | 352 | | | | | | | | | | | |
| 360 | 342 | | | | | | | | | | | |
| 350 | 323 | | | | | | | | | | | |
| 340 | 295 | | | | | | | | | | | |
| 330 | 255 | | | | | | | | | | | |
| 320 | 207 | | | | | | | | | | | |
| 310 | 152 | | | | | | | | | 1561 | | |
| 300 | 83.4 | | | | | | | | | 1557 | | |
| 290 | 40.2 | | | | | | | | | 1512 | 2020 | |
| 280 | 3.1 | | 383 | | | | | | | 1415 | 2007 | |
| 270 | | | 373 | | | | | | | 1275 | 1936 | |
| 260 | | 531 | 323 | | | | | | | 1092 | 1811 | |
| 250 | | 513 | 211 | | | | | | | 902 | 1599 | |
| 240 | | 455 | 29.7 | | | | | | | 733 | 1272 | |
| 230 | | 310 | | | | | | | | 582 | 888 | |
| 220 | | 157 | | | | | | | | 465 | 584 | |
| 210 | | 64.3 | | | | | | | | 382 | 418 | |
| 200 | | 12.4 | | | | | | | | 323 | 329 | |
| 190 | | | | | | | | | | 281 | 278 | |
| 180 | | | | | | | | | | 244 | 242 | |
| 170 | | | | | | | | | | 212 | 211 | |
| 160 | | | | | | | | | | 180 | 183 | |
| 150 | | | | | | | | | | 148 | 159 | |
| 140 | | | | | | | | | | 124 | 142 | |
| 130 | | | | | | | | | | 111 | 132 | |
| 120 | | | | | | | | | | 105 | 125 | |
| 110 | | | | | | | | | | 55.8 | 49.3 | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 29 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A1 | A1 | A1 | 1 | 1 | A2 | A2 | A2 | A0 | A0 | A0 | A0 |
| HMIN | 107 | 108 | 108 | 106 | 104 | | | 199 | 246 | | 237 | 248 |
| SCAT | 45.6 | 36.8 | 39.4 | 43.2 | 42.3 | | | 41.5 | 57.0 | | 40.1 | 45.7 |
| HMAXF | 288 | 291 | 279 | 272 | 265 | | | 278 | 334 | | 319 | 344 |
| SHMAX | 1185 | 1256 | 1422 | 1068 | 869 | | | 154 | 107 | | 90 | 92 |
| KM | | | | | | | | | | | | |
| 350 | | | | | | | | | | | | 150 |
| 340 | | | | | | | | | 163 | | | 149 |
| 330 | | | | | | | | | 163 | | | 146 |
| 320 | | | | | | | | | 161 | | 170 | 139 |
| 310 | | | | | | | | | 156 | | 167 | 129 |
| 300 | | 1956 | | | | | | | 149 | | 160 | 114 |
| 290 | 1620 | 1956 | | | | | | | 140 | | 147 | 93.9 |
| 280 | 1606 | 1916 | 2256 | 1712 | | | | 297 | 125 | | 128 | 71.0 |
| 270 | 1554 | 1803 | 2225 | 1711 | 1398 | | | 294 | 103 | | 102 | 49.0 |
| 260 | 1470 | 1617 | 2122 | 1681 | 1394 | | | 283 | 68.0 | | 72.2 | 30.3 |
| 250 | 1326 | 1314 | 1946 | 1605 | 1356 | | | 263 | 26.7 | | 41.9 | 12.4 |
| 240 | 1104 | 975 | 1690 | 1487 | 1277 | | | 232 | | | 16.2 | |
| 230 | 853 | 695 | 1329 | 1300 | 1160 | | | 183 | | | | |
| 220 | 623 | 524 | 963 | 1033 | 959 | | | 120 | | | | |
| 210 | 471 | 418 | 676 | 655 | 678 | | | 59.0 | | | | |
| 200 | 385 | 350 | 464 | 390 | 446 | | | 12.4 | | | | |
| 190 | 334 | 310 | 353 | 278 | 316 | | | | | | | |
| 180 | 302 | 282 | 294 | 225 | 245 | | | | | | | |
| 170 | 275 | 263 | 255 | 189 | 202 | | | | | | | |
| 160 | 246 | 246 | 224 | 155 | 168 | | | | | | | |
| 150 | 214 | 217 | 201 | 135 | 140 | | | | | | | |
| 140 | 183 | 179 | 175 | 123 | 119 | | | | | | | |
| 130 | 159 | 155 | 152 | 115 | 105 | | | | | | | |
| 120 | 146 | 146 | 140 | 111 | 97.2 | | | | | | | |
| 110 | 63.1 | 54.2 | 55.2 | 102 | 81.5 | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 30 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 0 | A0 | A2 | A2 | A2 | A3 | A3 | A3 | A2 | 2 | 2 | 3 |
| HMIN | 268 | 223 | 201 | 203 | 198 | | | | 109 | 108 | 107 | 107 |
| SCAT | 32.4 | 28.9 | 38.8 | 23.5 | 44.0 | | | | 36.4 | 49.3 | 42.3 | 33.5 |
| HMAXF | 342 | 279 | 278 | 254 | 265 | | | | 250 | 271 | 285 | 268 |
| SHMAX | 77 | 84 | 88 | 63 | 37 | | | | 375 | 700 | 1006 | 1094 |
| KM | | | | | | | | | | | | |
| 350 | 171 | | | | | | | | | | | |
| 340 | 171 | | | | | | | | | | | |
| 330 | 165 | | | | | | | | | | | |
| 320 | 151 | | | | | | | | | | | |
| 310 | 129 | | | | | | | | | | | |
| 300 | 97.3 | | | | | | | | | | | |
| 290 | 61.9 | | | | | | | | | 1353 | | |
| 280 | 36.1 | 224 | 171 | | | | | | | 870 | 1349 | |
| 270 | 12.4 | 218 | 169 | | 73.4 | | | | | 870 | 1312 | 1956 |
| 260 | | 199 | 162 | 197 | 73.2 | | | | 564 | 859 | 1234 | 1932 |
| 250 | | 169 | 148 | 196 | 71.4 | | | | 564 | 831 | 1125 | 1823 |
| 240 | | 120 | 131 | 180 | 67.9 | | | | 553 | 786 | 977 | 1626 |
| 230 | | 50.6 | 104 | 148 | 62.0 | | | | 521 | 721 | 804 | 1294 |
| 220 | | | 71.3 | 95.9 | 52.7 | | | | 467 | 637 | 628 | 906 |
| 210 | | | 37.2 | 37.0 | 35.8 | | | | 392 | 534 | 490 | 587 |
| 200 | | | | | 12.4 | | | | 318 | 432 | 392 | 419 |
| 190 | | | | | | | | | 259 | 349 | 329 | 339 |
| 180 | | | | | | | | | 212 | 290 | 286 | 294 |
| 170 | | | | | | | | | 176 | 243 | 253 | 261 |
| 160 | | | | | | | | | 146 | 203 | 222 | 231 |
| 150 | | | | | | | | | 121 | 170 | 193 | 203 |
| 140 | | | | | | | | | 104 | 143 | 164 | 176 |
| 130 | | | | | | | | | 89.8 | 125 | 142 | 153 |
| 120 | | | | | | | | | 78.9 | 116 | 129 | 140 |
| 110 | | | | | | | | | 23.8 | 80.4 | 95.1 | 61.7 |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 30 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A3 | A3 | A1 | A1 | A1 | A1 | A1 | 1 | 1 | 1 | 1 | 1 |
| HMIN | | 107 | 108 | | | | | 200 | 199 | 263 | 251 | 230 |
| SCAT | | 45.4 | 51.6 | | | | | 33.0 | 87.2 | 36.0 | 42.8 | 49.0 |
| HMAXF | | 274 | 309 | | | | | 250 | 348 | 349 | 345 | 326 |
| SHMAX | | 880 | 1091 | | | | | 108 | 94 | 67 | 91 | 106 |
| KM | | | | | | | | | | | | |
| 350 | | | | | | | | | 81.9 | 124 | 155 | |
| 340 | | | | | | | | | 81.7 | 122 | 155 | |
| 330 | | | | | | | | | 81.0 | 115 | 150 | 163 |
| 320 | | | | | | | | | 79.8 | 104 | 141 | 163 |
| 310 | | | 1184 | | | | | | 78.0 | 89.0 | 129 | 159 |
| 300 | | | 1176 | | | | | | 75.6 | 72.4 | 110 | 152 |
| 290 | | | 1145 | | | | | | 72.5 | 54.5 | 86.3 | 142 |
| 280 | | 1126 | 1093 | | | | | | 69.3 | 36.8 | 63.9 | 128 |
| 270 | | 1123 | 1017 | | | | | | 65.6 | 21.7 | 41.7 | 110 |
| 260 | | 1099 | 929 | | | | | | 61.5 | | 24.8 | 88.4 |
| 250 | | 1047 | 830 | | | | | 293 | 57.2 | | | 63.2 |
| 240 | | 967 | 726 | | | | | 287 | 52.8 | | | 37.1 |
| 230 | | 865 | 622 | | | | | 268 | 48.1 | | | 3.9 |
| 220 | | 745 | 524 | | | | | 225 | 42.7 | | | |
| 210 | | 608 | 438 | | | | | 138 | 35.2 | | | |
| 200 | | 475 | 370 | | | | | 12.4 | 12.4 | | | |
| 190 | | 373 | 315 | | | | | | | | | |
| 180 | | 311 | 270 | | | | | | | | | |
| 170 | | 273 | 230 | | | | | | | | | |
| 160 | | 246 | 192 | | | | | | | | | |
| 150 | | 218 | 154 | | | | | | | | | |
| 140 | | 184 | 138 | | | | | | | | | |
| 130 | | 157 | 130 | | | | | | | | | |
| 120 | | 146 | 126 | | | | | | | | | |
| 110 | | 88.3 | 49.3 | | | | | | | | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 31 OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | 1 | 1 | 3 | 3 | 3 | A1 | A1 | A1 | 1 | A1 | A1 | A0 |
| HMIN | 219 | 203 | 199 | 199 | 244 | 235 | 218 | 110 | 108 | 107 | | |
| SCAT | 34.0 | 26.1 | 20.7 | 53.5 | 44.5 | 43.3 | 51.0 | 30.5 | 27.4 | 45.3 | | |
| HMAXF | 291 | 255 | 239 | 276 | 320 | 331 | 314 | 243 | 242 | 255 | | |
| SHMAX | 86 | 82 | 47 | 66 | 66 | 77 | 81 | 240 | 413 | 526 | | |
| KM | | | | | | | | | | | | |
| 340 | | | | | | 129 | | | | | | |
| 330 | | | | | 118 | 129 | | | | | | |
| 320 | | | | | 118 | 127 | 123 | | | | | |
| 310 | | | | | 117 | 121 | 123 | | | | | |
| 300 | 187 | | | | 112 | 112 | 121 | | | | | |
| 290 | 187 | | | | 105 | 99.3 | 117 | | | | | |
| 280 | 182 | | | 112 | 94.6 | 82.4 | 110 | | | | | |
| 270 | 168 | | | 112 | 80.1 | 63.9 | 100 | | | | | |
| 260 | 146 | 254 | | 109 | 60.5 | 46.3 | 87.6 | | | 701 | | |
| 250 | 114 | 252 | | 105 | 30.0 | 30.5 | 72.5 | 450 | 815 | 698 | | |
| 240 | 76.5 | 235 | 182 | 99.7 | | 16.7 | 54.5 | 449 | 814 | 680 | | |
| 230 | 40.4 | 190 | 172 | 90.3 | | | 33.0 | 430 | 775 | 644 | | |
| 220 | 12.4 | 106 | 138 | 72.7 | | | 12.4 | 387 | 682 | 594 | | |
| 210 | | 36.8 | 69.8 | 43.9 | | | | 314 | 515 | 521 | | |
| 200 | | | 12.4 | 12.4 | | | | 235 | 361 | 431 | | |
| 190 | | | | | | | | 170 | 265 | 349 | | |
| 180 | | | | | | | | 124 | 210 | 289 | | |
| 170 | | | | | | | | 91.6 | 174 | 241 | | |
| 160 | | | | | | | | 71.1 | 145 | 202 | | |
| 150 | | | | | | | | 59.2 | 121 | 170 | | |
| 140 | | | | | | | | 54.1 | 101 | 144 | | |
| 130 | | | | | | | | 51.9 | 89.6 | 124 | | |
| 120 | | | | | | | | 43.8 | 81.1 | 114 | | |
| 110 | | | | | | | | 13.0 | 35.6 | 37.2 | | |

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 31 OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q,KP | A0 | A0 | A0 | A0 | A0 | A0 | A0 | A0 | 1 | 1 | S1 | 2 |
| HMIN | | | | | 108 | 108 | | 202 | 200 | 281 | 268 | 258 |
| SCAT | | | | | 31.1 | 29.6 | | 28.5 | 44.5 | 35.5 | 46.3 | 43.3 |
| HMAXF | | | | | 256 | 232 | | 250 | 278 | 366 | 351 | 329 |
| SHMAX | | | | | 602 | 381 | | 118 | 70 | 71 | 100 | 93 |
| KM | | | | | | | | | | | | |
| 370 | | | | | | | | | | 136 | | |
| 360 | | | | | | | | | | 135 | 178 | |
| 350 | | | | | | | | | | 129 | 178 | |
| 340 | | | | | | | | | | 118 | 176 | |
| 330 | | | | | | | | | | 102 | 169 | 176 |
| 320 | | | | | | | | | | 84.2 | 159 | 174 |
| 310 | | | | | | | | | | 63.1 | 141 | 167 |
| 300 | | | | | | | | | | 41.5 | 114 | 156 |
| 290 | | | | | | | | | | 24.8 | 76.9 | 139 |
| 280 | | | | | | | | | 124 | | 39.9 | 115 |
| 270 | | | | | | | | | 123 | | 12.4 | 82.4 |
| 260 | | | | | 1090 | | | | 119 | | | 27.3 |
| 250 | | | | | 1079 | | | 369 | 112 | | | |
| 240 | | | | | 1006 | 898 | | 358 | 102 | | | |
| 230 | | | | | 900 | 897 | | 328 | 88.2 | | | |
| 220 | | | | | 735 | 863 | | 236 | 70.5 | | | |
| 210 | | | | | 537 | 783 | | 78.6 | 41.4 | | | |
| 200 | | | | | 369 | 562 | | | 3.1 | | | |
| 190 | | | | | 268 | 298 | | | | | | |
| 180 | | | | | 212 | 172 | | | | | | |
| 170 | | | | | 176 | 123 | | | | | | |
| 160 | | | | | 150 | 97.6 | | | | | | |
| 150 | | | | | 129 | 80.7 | | | | | | |
| 140 | | | | | 112 | 70.0 | | | | | | |
| 130 | | | | | 102 | 66.5 | | | | | | |
| 120 | | | | | 93.6 | 60.9 | | | | | | |
| 110 | | | | | 30.3 | 28.1 | | | | | | |

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

RAMEY AFB, PUERTO RICO — 60 W — OCT 1961

| TIME | 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COUNT | 26 | 26 | 27 | 27 | 26 | 27 | 25 | 25 | 25 | 26 | 24 | 22 |
| KP | 1.4 | 1.4 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | 1.2 | 1.3 | 1.3 | 1.4 |
| HMIN | 250 | 240 | 229 | 213 | 222 | 253 | 223 | 111 | 108 | 107 | 107 | 107 |
| RATIO | 6.4 | 7.1 | 7.7 | 8.4 | 5.7 | 5.5 | 5.6 | 6.0 | 5.3 | 4.8 | 4.6 | 4.7 |
| SCAT | 38.9 | 35.1 | 33.1 | 32.0 | 51.8 | 48.8 | 48.5 | 34.8 | 37.3 | 41.0 | 44.7 | 42.5 |
| NMAX | 240 | 255 | 266 | 228 | 138 | 118 | 129 | 416 | 604 | 805 | 1042 | 1269 |
| HMAXF | 337 | 315 | 297 | 276 | 314 | 347 | 315 | 243 | 250 | 264 | 278 | 283 |
| SHMAX | 128 | 119 | 113 | 88 | 89 | 75 | 80 | 236 | 396 | 596 | 808 | 952 |
| SHINF | 805 | 839 | 863 | 732 | 477 | 407 | 443 | 1410 | 2101 | 2866 | 3747 | 4531 |
| KM | | | | | | | | | | | | |
| 950 | 18.6 | 17.7 | 16.9 | 12.8 | 9.6 | 9.6 | 8.9 | 20.1 | 30.2 | 43.6 | 60.0 | 74.4 |
| 900 | 23.9 | 22.7 | 21.6 | 16.4 | 12.4 | 12.3 | 11.4 | 25.8 | 38.8 | 55.9 | 77.0 | 95.5 |
| 850 | 30.6 | 29.1 | 27.7 | 21.1 | 15.8 | 15.8 | 14.6 | 33.1 | 49.8 | 71.8 | 98.9 | 123 |
| 800 | 39.3 | 37.3 | 35.6 | 27.1 | 20.3 | 20.3 | 18.7 | 42.5 | 63.8 | 92.1 | 127 | 157 |
| 750 | 50.2 | 47.8 | 45.6 | 34.7 | 26.0 | 25.9 | 24.0 | 54.4 | 81.9 | 118 | 163 | 201 |
| 700 | 64.1 | 61.1 | 58.3 | 44.4 | 33.2 | 33.1 | 30.7 | 69.8 | 105 | 151 | 208 | 258 |
| 650 | 81.6 | 77.9 | 74.4 | 56.8 | 42.3 | 42.0 | 39.1 | 89.3 | 134 | 193 | 266 | 329 |
| 600 | 103 | 98.8 | 94.5 | 72.3 | 53.6 | 53.0 | 49.6 | 114 | 171 | 246 | 339 | 419 |
| 550 | 129 | 124 | 119 | 91.7 | 67.3 | 66.2 | 62.4 | 145 | 218 | 313 | 429 | 531 |
| 500 | 159 | 155 | 149 | 115 | 83.3 | 81.1 | 77.6 | 183 | 275 | 394 | 539 | 667 |
| 490 | 165 | 161 | 155 | 120 | 86.7 | 84.2 | 80.9 | 192 | 288 | 412 | 563 | 697 |
| 480 | 172 | 168 | 162 | 126 | 90.2 | 87.3 | 84.2 | 201 | 301 | 430 | 589 | 728 |
| 470 | 178 | 174 | 169 | 131 | 93.7 | 90.4 | 87.6 | 210 | 315 | 450 | 614 | 760 |
| 460 | 185 | 181 | 176 | 137 | 97.3 | 93.4 | 91.0 | 220 | 329 | 469 | 641 | 792 |
| 450 | 191 | 188 | 182 | 143 | 101 | 96.4 | 94.4 | 230 | 344 | 490 | 668 | 825 |
| 440 | 197 | 195 | 189 | 149 | 104 | 99.3 | 97.9 | 240 | 359 | 510 | 695 | 859 |
| 430 | 203 | 202 | 197 | 155 | 108 | 102 | 101 | 250 | 374 | 531 | 723 | 893 |
| 420 | 209 | 208 | 204 | 161 | 111 | 104 | 105 | 261 | 390 | 553 | 751 | 928 |
| 410 | 214 | 215 | 210 | 167 | 115 | 107 | 108 | 272 | 406 | 574 | 780 | 962 |
| 400 | 219 | 221 | 217 | 173 | 118 | 108 | 111 | 283 | 422 | 596 | 808 | 997 |
| 390 | 224 | 227 | 224 | 179 | 121 | 110 | 114 | 294 | 438 | 618 | 836 | 1031 |
| 380 | 227 | 232 | 229 | 185 | 123 | 111 | 117 | 305 | 455 | 640 | 864 | 1064 |
| 370 | 230 | 237 | 235 | 191 | 126 | 111 | 119 | 317 | 471 | 661 | 891 | 1097 |
| 360 | 231 | 242 | 240 | 197 | 128 | 110 | 121 | 328 | 487 | 682 | 916 | 1128 |
| 350 | 230 | 245 | 244 | 202 | 130 | 110 | 123 | 339 | 503 | 702 | 941 | 1157 |
| 340 | 227 | 247 | 247 | 207 | 131 | 108 | 125 | 350 | 519 | 721 | 964 | 1184 |
| 330 | 220 | 247 | 250 | 212 | 131 | 105 | 125 | 360 | 534 | 739 | 984 | 1208 |
| 320 | 208 | 244 | 252 | 216 | 131 | 99.7 | 125 | 371 | 548 | 755 | 1002 | 1229 |
| 310 | 191 | 238 | 253 | 219 | 129 | 92.4 | 123 | 380 | 561 | 769 | 1017 | 1246 |
| 300 | 169 | 226 | 252 | 222 | 126 | 83.0 | 120 | 389 | 572 | 781 | 1029 | 1258 |
| 290 | 143 | 206 | 247 | 222 | 121 | 72.1 | 114 | 397 | 583 | 789 | 1036 | 1265 |
| 280 | 114 | 178 | 236 | 221 | 114 | 61.3 | 107 | 403 | 591 | 792 | 1035 | 1260 |
| 270 | 84.5 | 142 | 214 | 216 | 104 | 48.5 | 96.3 | 409 | 597 | 789 | 1019 | 1230 |
| 260 | 58.4 | 102 | 180 | 206 | 92.3 | 34.8 | 83.0 | 412 | 600 | 776 | 982 | 1166 |
| 250 | 37.9 | 64.0 | 132 | 189 | 78.7 | 24.1 | 66.5 | 413 | 598 | 750 | 920 | 1065 |
| 240 | 20.5 | 33.4 | 78.6 | 156 | 62.2 | 13.8 | 49.6 | 409 | 586 | 704 | 829 | 928 |
| 230 | 9.6 | 14.6 | 37.5 | 106 | 44.8 | 6.4 | 33.2 | 395 | 554 | 638 | 712 | 765 |
| 220 | 3.8 | 4.1 | 17.4 | 48.8 | 25.0 | 3.1 | 17.7 | 363 | 499 | 556 | 584 | 609 |
| 210 | .6 | 1.4 | 5.9 | 13.9 | 10.9 | 1.3 | 7.6 | 309 | 422 | 465 | 469 | 479 |
| 200 | | | .5 | 2.3 | 1.1 | .2 | 2.1 | 242 | 340 | 381 | 381 | 391 |
| 190 | | | | | | | | 177 | 269 | 315 | 322 | 337 |
| 180 | | | | | | | | 126 | 214 | 266 | 282 | 300 |
| 170 | | | | | | | | 93.2 | 173 | 227 | 250 | 271 |
| 160 | | | | | | | | 74.8 | 143 | 193 | 220 | 242 |
| 150 | | | | | | | | 64.9 | 120 | 164 | 191 | 211 |
| 140 | | | | | | | | 58.4 | 104 | 140 | 165 | 183 |
| 130 | | | | | | | | 52.9 | 93.6 | 124 | 147 | 161 |
| 120 | | | | | | | | 43.6 | 85.0 | 114 | 136 | 149 |
| 110 | | | | | | | | 10.5 | 42.6 | 66.1 | 63.4 | 67.5 |

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

RAMEY AFB, PUERTO RICO — 60 W — OCT 1961

| TIME | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COUNT | 25 | 24 | 22 | 18 | 17 | 13 | 10 | 23 | 25 | 25 | 26 | 28 |
| KP | 1.3 | 1.5 | 1.3 | 1.1 | 1.1 | .8 | 1.4 | 1.2 | 1.4 | 1.4 | 1.3 | 1.4 |
| HMIN | 108 | 107 | 107 | 107 | 108 | 108 | 102 | 204 | 217 | 252 | 266 | 250 |
| RATIO | 4.6 | 4.5 | 4.5 | 5.1 | 5.1 | 5.3 | 5.8 | 6.2 | 5.3 | 5.6 | 5.8 | 6.2 |
| SCAT | 44.6 | 46.6 | 47.5 | 41.0 | 42.9 | 44.9 | 38.7 | 41.7 | 50.3 | 44.5 | 43.6 | 40.7 |
| NMAX | 1225 | 1242 | 1409 | 1462 | 1193 | 950 | 735 | 403 | 257 | 244 | 246 | 249 |
| HMAXF | 286 | 290 | 296 | 281 | 272 | 270 | 269 | 293 | 324 | 355 | 362 | 340 |
| SHMAX | 964 | 1038 | 1113 | 998 | 815 | 645 | 440 | 223 | 172 | 150 | 147 | 136 |
| SHINF | 4419 | 4541 | 5088 | 5121 | 4180 | 3324 | 2512 | 1360 | 898 | 838 | 841 | 838 |
| KM | | | | | | | | | | | | |
| 950 | 73.0 | 77.5 | 88.6 | 85.6 | 66.6 | 52.6 | 40.5 | 25.1 | 18.7 | 20.6 | 21.6 | 19.5 |
| 900 | 93.7 | 99.4 | 114 | 110 | 85.5 | 67.5 | 51.9 | 32.2 | 24.0 | 26.4 | 27.7 | 25.0 |
| 850 | 120 | 128 | 146 | 141 | 110 | 86.6 | 66.7 | 41.3 | 30.7 | 33.9 | 35.5 | 32.1 |
| 800 | 154 | 164 | 187 | 181 | 141 | 111 | 85.5 | 53.0 | 39.4 | 43.4 | 45.5 | 41.1 |
| 750 | 198 | 210 | 240 | 232 | 180 | 142 | 110 | 67.9 | 50.4 | 55.5 | 58.1 | 52.6 |
| 700 | 253 | 268 | 307 | 297 | 231 | 182 | 140 | 86.8 | 64.5 | 70.9 | 74.1 | 67.2 |
| 650 | 323 | 342 | 391 | 379 | 295 | 233 | 179 | 111 | 82.1 | 90.0 | 94.1 | 85.5 |
| 600 | 411 | 435 | 498 | 483 | 376 | 297 | 229 | 141 | 104 | 114 | 119 | 108 |
| 550 | 521 | 550 | 629 | 611 | 477 | 377 | 290 | 178 | 131 | 142 | 147 | 135 |
| 500 | 653 | 689 | 787 | 767 | 600 | 474 | 365 | 223 | 162 | 173 | 180 | 167 |
| 490 | 683 | 719 | 822 | 802 | 628 | 496 | 382 | 233 | 169 | 180 | 187 | 173 |
| 480 | 713 | 750 | 857 | 837 | 656 | 518 | 399 | 243 | 176 | 187 | 193 | 180 |
| 470 | 744 | 782 | 893 | 874 | 685 | 541 | 417 | 253 | 183 | 193 | 200 | 187 |
| 460 | 775 | 815 | 930 | 911 | 715 | 565 | 435 | 264 | 190 | 200 | 206 | 193 |
| 450 | 807 | 848 | 968 | 949 | 745 | 589 | 454 | 274 | 197 | 206 | 212 | 200 |
| 440 | 840 | 881 | 1006 | 988 | 776 | 614 | 473 | 285 | 203 | 212 | 218 | 206 |
| 430 | 873 | 915 | 1044 | 1028 | 808 | 639 | 492 | 296 | 210 | 218 | 224 | 213 |
| 420 | 907 | 948 | 1083 | 1067 | 840 | 664 | 512 | 307 | 217 | 223 | 229 | 219 |
| 410 | 940 | 982 | 1121 | 1107 | 873 | 690 | 532 | 318 | 223 | 228 | 233 | 224 |
| 400 | 973 | 1015 | 1158 | 1147 | 905 | 716 | 552 | 329 | 229 | 232 | 237 | 229 |
| 390 | 1006 | 1047 | 1195 | 1186 | 938 | 741 | 572 | 339 | 235 | 236 | 240 | 234 |
| 380 | 1038 | 1078 | 1230 | 1224 | 970 | 767 | 591 | 349 | 240 | 239 | 242 | 238 |
| 370 | 1069 | 1108 | 1263 | 1262 | 1001 | 792 | 611 | 359 | 245 | 240 | 241 | 241 |
| 360 | 1098 | 1136 | 1295 | 1298 | 1031 | 816 | 630 | 368 | 249 | 239 | 238 | 243 |
| 350 | 1125 | 1161 | 1323 | 1331 | 1061 | 839 | 648 | 376 | 252 | 235 | 230 | 243 |
| 340 | 1151 | 1184 | 1348 | 1362 | 1088 | 861 | 665 | 383 | 253 | 226 | 218 | 239 |
| 330 | 1173 | 1203 | 1370 | 1390 | 1113 | 881 | 681 | 390 | 253 | 212 | 199 | 230 |
| 320 | 1192 | 1218 | 1386 | 1414 | 1136 | 900 | 695 | 394 | 250 | 192 | 176 | 216 |
| 310 | 1207 | 1228 | 1396 | 1434 | 1156 | 915 | 707 | 397 | 244 | 168 | 148 | 195 |
| 300 | 1216 | 1231 | 1397 | 1448 | 1171 | 928 | 718 | 397 | 233 | 141 | 118 | 169 |
| 290 | 1220 | 1222 | 1380 | 1456 | 1183 | 938 | 725 | 392 | 217 | 112 | 86.5 | 135 |
| 280 | 1210 | 1194 | 1341 | 1448 | 1189 | 942 | 729 | 379 | 197 | 81.3 | 57.9 | 109 |
| 270 | 1176 | 1138 | 1270 | 1406 | 1184 | 939 | 725 | 357 | 173 | 56.8 | 34.6 | 80.4 |
| 260 | 1111 | 1057 | 1164 | 1323 | 1157 | 921 | 707 | 325 | 143 | 35.5 | 17.8 | 54.2 |
| 250 | 1013 | 948 | 1027 | 1196 | 1100 | 883 | 673 | 281 | 109 | 21.8 | 7.4 | 34.8 |
| 240 | 885 | 818 | 868 | 1024 | 1007 | 825 | 616 | 227 | 76.7 | 12.1 | 2.4 | 20.4 |
| 230 | 738 | 681 | 702 | 823 | 876 | 741 | 536 | 164 | 48.4 | 6.1 | .7 | 9.0 |
| 220 | 596 | 559 | 553 | 631 | 707 | 629 | 434 | 101 | 28.8 | 2.7 | | 3.0 |
| 210 | 476 | 458 | 437 | 469 | 529 | 494 | 323 | 41.9 | 13.1 | .5 | | .5 |
| 200 | 391 | 385 | 360 | 362 | 385 | 356 | 219 | 5.9 | 2.6 | | | |
| 190 | 336 | 336 | 314 | 301 | 293 | 246 | 141 | | | | | |
| 180 | 300 | 303 | 284 | 264 | 239 | 181 | 93.3 | | | | | |
| 170 | 271 | 277 | 259 | 236 | 204 | 143 | 66.3 | | | | | |
| 160 | 242 | 252 | 234 | 211 | 176 | 118 | 51.1 | | | | | |
| 150 | 214 | 223 | 206 | 185 | 151 | 98.1 | 42.5 | | | | | |
| 140 | 186 | 191 | 178 | 160 | 130 | 84.5 | 37.7 | | | | | |
| 130 | 167 | 167 | 157 | 141 | 116 | 76.7 | 34.8 | | | | | |
| 120 | 152 | 155 | 146 | 130 | 108 | 71.4 | 31.9 | | | | | |
| 110 | 65.0 | 77.7 | 74.2 | 68.7 | 50.6 | 30.4 | 27.1 | | | | | |
| 100 | | | | | | | 13.5 | | | | | |

JULY 1961 - JUNE 1954

Table 1

Resolute Bay, Canada (74.7° N, 94.9° W) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | (290) | 4.8 | 23 | 235 | --- | | 2.0 | | 3.0 |
| 01 | 285 | 4.7 | 23 | 250 | --- | | 2.0 | | 3.0 |
| 02 | 290 | 4.8 | 24 | 240 | --- | | 2.1 | | 3.0 |
| 03 | 300 | 4.9 | 24 | 235 | 3.3 | | 2.2 | | 3.0 |
| 04 | 310 | 4.8 | 21 | 230 | 3.5 | | 2.4 | | 3.0 |
| 05 | 340 | 4.7 | 22 | 230 | 3.6 | | 2.4 | | 3.0 |
| 06 | 345 | 4.8 | 21 | 220 | 3.6 | | 2.5 | | 3.0 |
| 07 | 470 | 4.6 | 22 | 220 | 3.9 | | 2.8 | | 2.6 |
| 08 | 400 | 4.7 | 19 | 210 | 4.0 | | 2.9 | | 2.8 |
| 09 | 435 | 4.9 | 19 | 200 | 4.0 | | 3.0 | | 2.7 |
| 10 | 500 | 4.5 | 21 | 200 | 4.0 | | 3.0 | | G |
| 11 | 470 | 4.9 | 17 | 200 | 4.1 | | 3.0 | | 2.6 |
| 12 | 395 | 5.0 | 18 | 200 | 4.2 | | 3.0 | | 2.9 |
| 13 | 425 | 5.0 | 18 | 200 | 4.2 | | 3.0 | | 2.75 |
| 14 | 400 | 5.1 | 17 | 200 | 4.2 | | 3.0 | | 2.85 |
| 15 | 430 | 5.0 | 19 | 200 | 4.1 | | 3.0 | | 2.7 |
| 16 | 415 | 5.3 | 21 | 205 | 4.0 | | 3.0 | | 2.8 |
| 17 | 390 | 5.0 | 20 | 210 | 4.0 | | 2.8 | | 2.85 |
| 18 | 380 | 5.0 | 23 | 205 | 3.9 | | 2.7 | | 2.85 |
| 19 | 350 | 5.1 | 23 | 215 | 3.8 | | 2.5 | | 2.9 |
| 20 | 330 | 5.1 | 23 | 220 | 3.7 | | 2.4 | | 3.0 |
| 21 | 300 | 5.1 | 23 | 225 | 3.4 | | 2.2 | | 3.0 |
| 22 | 290 | 5.0 | 24 | 220 | 3.3 | | 2.2 | | 3.0 |
| 23 | 290 | 5.0 | 24 | 230 | 3.1 | | 2.0 | | 3.0 |

Time: 90.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 2

Kiruna, Sweden (67.8° N, 20.4° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.6) | 8 | 300 | | | | 4.0 | (2.9) |
| 01 | | (4.7) | 8 | 300 | | --- | --- | 4.2 | (2.9) |
| 02 | --- | 4.6 | 11 | 280 | --- | --- | 1.6 | 4.0 | 2.9 |
| 03 | 365 | 4.5 | 13 | 255 | 3.1 | --- | 1.8 | 4.2 | 2.7 |
| 04 | 375 | 4.6 | 15 | 240 | 3.4 | --- | 2.2 | 4.0 | 2.8 |
| 05 | 390 | 4.8 | 18 | 220 | 3.6 | --- | 2.4 | 4.0 | 2.8 |
| 06 | 385 | 4.9 | 18 | 220 | 3.8 | 105 | 2.6 | | 2.8 |
| 07 | 385 | 5 1 | 21 | 205 | 4.0 | 105 | 2.8 | | 2.8 |
| 08 | 400 | 5.2 | 21 | 205 | 4.2 | 100 | 2.9 | | 2.8 |
| 09 | 365 | 5.4 | 22 | 210 | 4.4 | 100 | 3.0 | | 2.9 |
| 10 | 360 | 5.4 | 23 | 205 | 4.4 | 100 | 3.0 | | 2.9 |
| 11 | 360 | 5.4 | 25 | 205 | 4.4 | 100 | 3.0 | | 2.9 |
| 12 | 355 | 5.6 | 21 | 210 | 4.4 | 100 | 3.0 | | 2.9 |
| 13 | 350 | 5.4 | 24 | 200 | 4.5 | 105 | 3.0 | | 3.0 |
| 14 | 360 | 5.3 | 25 | 210 | 4.4 | 105 | 3.0 | | 3.0 |
| 15 | 350 | 5.3 | 24 | 210 | 4.3 | 105 | 3.0 | | 2.95 |
| 16 | 340 | 5.0 | 26 | 210 | 4.2 | 105 | 2.8 | | 3.0 |
| 17 | 335 | 5.2 | 23 | 225 | 4.2 | 105 | 2.7 | 3.6 | 3.0 |
| 18 | 320 | 5.0 | 24 | 230 | 3.8 | 105 | 2.4 | 3.4 | 3.2 |
| 19 | 300 | 5.2 | 24 | 235 | 3.4 | 110 | 2.2 | 3.4 | 3.1 |
| 20 | --- | 5.0 | 20 | 250 | --- | --- | 2.0 | 2.8 | 3.1 |
| 21 | --- | 4.8 | 18 | 270 | --- | --- | --- | 3.1 | 3.15 |
| 22 | | 4.5 | 13 | 290 | | --- | --- | 3.0 | 3.0 |
| 23 | | (4.6) | 9 | 300 | | --- | --- | 3.4 | (2.9) |

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 3

Sodankyla, Finland (67.4° N, 26.6° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.0 | 14 | 305 | | --- | ---- | (2.4) | 2.80 |
| 01 | | 4.8 | 13 | 310 | | --- | ---- | (3.0) | 2.75 |
| 02 | | 4.8 | 11 | 315 | --- | --- | ---- | (3.2) | 2.75 |
| 03 | | 4.6 | 10 | 275 | --- | --- | ---- | (2.8) | 2.80 |
| 04 | | 4.6 | 10 | 250 | 3.2 | 120 | 2.10 | (3.3) | (2.80) |
| 05 | | 5.0 | 12 | 230 | 3.6 | 110 | 2.30 | (3.3) | 2.75 |
| 06 | | 5.0 | 16 | 215 | 3.8 | 110 | 2.60 | (3.3) | 2.85 |
| 07 | | 5.2 | 13 | 220 | 4.0 | 110 | 2.80 | | 2.75 |
| 08 | | 5.2 | 16 | 210 | 4.2 | 110 | 2.90 | | 2.80 |
| 09 | | 5.3 | 17 | 210 | 4.3 | 110 | 3.00 | | 2.80 |
| 10 | | 5.6 | 18 | 220 | 4.4 | 110 | 3.15 | | 2.80 |
| 11 | | 5.7 | 20 | 210 | 4.5 | 110 | 3.20 | | 2.80 |
| 12 | | 5.6 | 20 | 210 | 4.5 | 110 | 3.30 | 3.3 | 2.85 |
| 13 | | 5.5 | 21 | 210 | 4.5 | 110 | 3.20 | 3.7 | 2.90 |
| 14 | | 5.6 | 22 | 210 | 4.4 | 110 | 3.20 | | 2.80 |
| 15 | | 5.3 | 24 | 215 | 4.4 | 110 | 3.05 | | 2.85 |
| 16 | | 5.4 | 23 | 210 | 4.2 | 115 | 3.00 | | 2.95 |
| 17 | | 5.2 | 23 | 220 | --- | 110 | 2.80 | | 2.95 |
| 18 | | 5.4 | 21 | 230 | --- | 115 | 2.60 | 3.2 | 2.95 |
| 19 | | 5.2 | 21 | 240 | --- | 115 | 2.40 | | 2.95 |
| 20 | | 5.3 | 20 | 250 | | 125 | 2.20 | 3.2 | 3.00 |
| 21 | | 5.2 | 14 | 260 | | 130 | 1.95 | 2.6 | 3.00 |
| 22 | | 4.9 | 17 | 265 | | --- | ---- | (2.6) | 2.90 |
| 23 | | 4.6 | 12 | 280 | | --- | ---- | (2.5) | 2.80 |

Time: 30.0°E.
Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 4

Lulea, Sweden (65.6° N, 22.1° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.6 | 12 | 290 | | | | (1.4) | 2.9 |
| 01 | | 4.5 | 12 | 290 | | | | (2.4) | 2.9 |
| 02 | --- | 4.6 | 10 | 280 | --- | --- | --- | (2.3) | 2.9 |
| 03 | (370) | 4.6 | 16 | 270 | 3.1 | 140 | 2.0 | 2.0 | 2 9 |
| 04 | (360) | 4.7 | 18 | 245 | 3.4 | 130 | 2.3 | | 2.8 |
| 05 | 390 | 4.9 | 19 | 235 | 3.7 | 125 | 2.5 | | 2.8 |
| 06 | 385 | 5.1 | 16 | 225 | 4.0 | 120 | 2.7 | | 2.8 |
| 07 | 405 | 5.3 | 14 | 225 | 4.1 | 115 | 2.9 | | 2.8 |
| 08 | 350 | 5.4 | 12 | 225 | 4.2 | 110 | 3.0 | | 2.85 |
| 09 | 380 | 5.6 | 16 | (230) | 4.4 | 115 | 3.1 | | 2.8 |
| 10 | 360 | 5.7 | 18 | 230 | 4.4 | 110 | 3.3 | | 2.9 |
| 11 | 350 | 5.8 | 16 | 220 | 4.4 | 115 | 3.2 | | 2.9 |
| 12 | 350 | 5.5 | 16 | 215 | 4.4 | 110 | 3.4 | | 2.9 |
| 13 | 355 | 5.8 | 14 | 215 | 4.4 | 110 | 3.2 | | 2.9 |
| 14 | 350 | 5.7 | 15 | (215) | 4.3 | 110 | 3.2 | | 2.9 |
| 15 | 350 | 5.4 | 18 | (225) | 4.3 | 120 | 3.1 | | 3.0 |
| 16 | (345) | 5.4 | 19 | 225 | 4.1 | 120 | 3.0 | | 3.0 |
| 17 | (330) | 5.3 | 19 | 225 | --- | 120 | 2.8 | | 3.0 |
| 18 | --- | 5.3 | 21 | 240 | --- | 125 | 2.6 | | 3.0 |
| 19 | --- | 5.3 | 21 | 250 | --- | 145 | 2.2 | | 3.0 |
| 20 | --- | 5.3 | 21 | 255 | | 145 | 2.0 | | 2.9 |
| 21 | | 5.0 | 19 | 260 | | 140 | 1.7 | | 3.0 |
| 22 | | 4.8 | 17 | 275 | | --- | 1.6 | | 2.9 |
| 23 | | 4.6 | 18 | 280 | | | | (1.9) | 2.9 |

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 5

Lycksele, Sweden (64.7° N, 18.8° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.4 | 25 | 290 | | --- | ---- | 3.1 | 2.75 |
| 01 | | 4.4 | 24 | 290 | | --- | ---- | 3.5 | 2.7 |
| 02 | --- | 4.4 | 24 | 280 | ---- | 100 | 1.55 | 3.3 | 2.7 |
| 03 | 350 | 4.4 | 23 | 260 | 2.80 | --- | 1.70 | 3.4 | 2.7 |
| 04 | 350 | 4.6 | 20 | 240 | 3.30 | 100 | 2.00 | 3.7 | 2.7 |
| 05 | 375 | 4.7 | 23 | 230 | 3.55 | 100 | 2.30 | 3.5 | 2.7 |
| 06 | 380 | 4.8 | 24 | 225 | 3.80 | 100 | 2.50 | 3.5 | 2.8 |
| 07 | 400 | 5.0 | 23 | 210 | 4.00 | 100 | 2.70 | 3.9 | 2.7 |
| 08 | 400 | 5.2 | 23 | 210 | 4.20 | 100 | 2.90 | 3.3 | 2.7 |
| 09 | 400 | 5.4 | 26 | 210 | 4.30 | 100 | 3.00 | 3.6 | 2.8 |
| 10 | 380 | 5.6 | 23 | 210 | 4.40 | 100 | 3.10 | 3.8 | 2.8 |
| 11 | 345 | 5.8 | 22 | 205 | 4.40 | 100 | 3.10 | 3.6 | 2.8 |
| 12 | 355 | 5.6 | 25 | 200 | 4.50 | 100 | 3.10 | 4.0 | 2.8 |
| 13 | 360 | 5.5 | 27 | 200 | 4.40 | 100 | 3.10 | 3.4 | 2.8 |
| 14 | 385 | 5.6 | 26 | 205 | 4.40 | 100 | 3.10 | | 2.8 |
| 15 | 355 | 5.4 | 27 | 210 | 4.30 | 100 | 3.00 | | 2.8 |
| 16 | 345 | 5.3 | 26 | 215 | 4.20 | 100 | 2.90 | 3.2 | 2.8 |
| 17 | 330 | 5.4 | 26 | 215 | 4.10 | 100 | 2.70 | 3.4 | 2.9 |
| 18 | 315 | 5.4 | 26 | 230 | 3.80 | 105 | 2.40 | 3.5 | 2.9 |
| 19 | (290) | 5.3 | 26 | 240 | 3.55 | 100 | 2.20 | 3.2 | 3.0 |
| 20 | --- | 5.4 | 26 | 250 | ---- | 100 | 2.00 | 3.2 | 2.9 |
| 21 | | 4.9 | 27 | 250 | | 100 | 1.60 | 2.8 | 2.8 |
| 22 | | 4.7 | 26 | 265 | | 100 | 1.50 | 2.5 | 2.8 |
| 23 | | 4.5 | 26 | 270 | | 100 | ---- | 3.2 | 2.7 |

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 16.0 Mc in 6 minutes, automatic operation.

Table 6

Anchorage, Alaska (61.2° N, 149.9° W) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (3.7) | 21 | | | | | | (2.85) |
| 01 | | (3.6) | 23 | | | --- | ---- | 2.6 | (2.82) |
| 02 | | (3.95) | 22 | | | --- | E | 2.2 | (2.85) |
| 03 | | (4.05) | 20 | | | --- | E | 2.2 | 2.80 |
| 04 | | 4.3 | 23 | | --- | <123 | (1.80) | 2.0 | 2.75 |
| 05 | | (4.65) | 20 | | 3.4 | 115 | 2.25 | 2.3 | (2.75) |
| 06 | | 4.8 | 22 | | 3.6 | 111 | 2.50 | | 2.72 |
| 07 | | 4.9 | 25 | | 3.8 | 109 | 2.80 | | 2.70 |
| 08 | | 4.9 | 23 | | 4.0 | 105 | (2.90) | | 2.70 |
| 09 | | 5.0 | 25 | | 4.2 | 105 | 3.00 | 3.2 | 2.65 |
| 10 | | 5.0 | 25 | | 4.2 | 105 | 3.20 | 3.3 | 2.65 |
| 11 | | 5.0 | 24 | | 4.3 | 103 | 3.25 | 3.5 | 2.70 |
| 12 | | 5.05 | 22 | | 4.3 | 103 | 3.20 | 3.5 | 2.65 |
| 13 | | 5.1 | 24 | | 4.4 | 105 | (3.20) | 3.4 | 2.65 |
| 14 | | 5.3 | 24 | | 4.4 | 104 | (3.18) | 3.4 | 2.80 |
| 15 | | 5.2 | 26 | | 4.3 | 105 | 3.10 | | 2.78 |
| 16 | | 5.15 | 24 | | 4.2 | 105 | 3.00 | | 2.85 |
| 17 | | 5.2 | 28 | | 4.0 | 107 | (2.75) | | 3.00 |
| 18 | | 5.1 | 29 | | --- | 109 | 2.60 | | 3.00 |
| 19 | | 5.0 | 24 | | | 115 | (2.20) | 2.5 | 3.10 |
| 20 | | 4.95 | 26 | | | (125) | (2.00) | 2.1 | 3.10 |
| 21 | | 4.5 | 26 | | | 138 | (1.60) | 1.9 | 3.05 |
| 22 | | 4.0 | 25 | | | | | 1.6 | 3.00 |
| 23 | | (3.8) | 24 | | | | | 2.3 | (2.90) |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 7

Nurmijarvi, Finland (60.5° N, 24.6° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (5.7) | 5 | 290 | | | | | (3.00) |
| 01 | | (5.0) | 4 | 290 | | | | | ---- |
| 02 | | (4.5) | 7 | 290 | | | | | (3.00) |
| 03 | | (4.3) | 7 | 300 | | | | | (2.90) |
| 04 | | 4.5 | 14 | 280 | --- | | | | 2.90 |
| 05 | | 4.8 | 17 | 245 | 3.3 | | ---- | | 3.00 |
| 06 | | 4.9 | 17 | 230 | 3.7 | | 2.25 | 2.3 | 2.95 |
| 07 | | 5.0 | 20 | 210 | 4.0 | | 2.60 | | 3.00 |
| 08 | | 5.4 | 20 | 210 | 4.2 | | 2.90 | | 3.00 |
| 09 | | 5.6 | 20 | 220 | 4.3 | | 3.00 | | 2.90 |
| 10 | | 6.0 | 18 | 210 | 4.4 | | ---- | | 3.00 |
| 11 | | 6.0 | 26 | 210 | 4.6 | | ---- | | 3.00 |
| 12 | | 6.0 | 23 | 220 | 4.5 | | ---- | | 3.05 |
| 13 | | 5.9 | 24 | 215 | 4.5 | | ---- | | 3.10 |
| 14 | | 5.6 | 27 | 210 | 4.5 | | ---- | | 3.00 |
| 15 | | 5.6 | 25 | 210 | 4.5 | | ---- | | 3.05 |
| 16 | | 5.6 | 27 | 210 | 4.4 | | ---- | | 3.10 |
| 17 | | 5.5 | 27 | 215 | 4.2 | | ---- | | 3.10 |
| 18 | | 5.5 | 23 | 230 | 4.0 | | 2.60 | 2.8 | 3.10 |
| 19 | | 5.6 | 24 | 270 | --- | | 2.30 | 2.5 | 3.15 |
| 20 | | 5.8 | 23 | 270 | --- | | ---- | | 3.15 |
| 21 | | 5.9 | 15 | 270 | | | | | 3.10 |
| 22 | | 5.5 | 11 | 270 | | | | | 3.10 |
| 23 | | (5.6) | 5 | 270 | | | | | ---- |

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 8

Upsala, Sweden (59.8° N, 17.6° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.4 | 30 | 280 | | --- | ---- | 2.4 | 2.7 |
| 01 | | 4.2 | 31 | 280 | | --- | ---- | 2.5 | 2.7 |
| 02 | | 4.0 | 30 | 290 | | 125 | 1.40 | 2.5 | 2.7 |
| 03 | --- | 3.9 | 29 | 285 | ---- | --- | 1.55 | 3.2 | 2.7 |
| 04 | 460 | 4.2 | 30 | 250 | 3.20 | 100 | 1.90 | 3.7 | 2.7 |
| 05 | 380 | 4.6 | 30 | 245 | 3.60 | 110 | 2.25 | 3.8 | 2.8 |
| 06 | 410 | 5.0 | 30 | 220 | 3.90 | 105 | 2.50 | 4.4 | 2.8 |
| 07 | 420 | 5.1 | 29 | 220 | 4.20 | 105 | 2.70 | 4.1 | 2.75 |
| 08 | 405 | 5.3 | 30 | 220 | 4.30 | 105 | 3.00 | 4.5 | 2.8 |
| 09 | 395 | 5.8 | 30 | 210 | 4.50 | 105 | 3.15 | 4.4 | 2.8 |
| 10 | 380 | 5.8 | 30 | 210 | 4.60 | 105 | 3.20 | 4.5 | 2.8 |
| 11 | 360 | 6.1 | 29 | 210 | 4.60 | 100 | 3.20 | 4.5 | 2.85 |
| 12 | 365 | 5.9 | 28 | 210 | 4.70 | 100 | 3.30 | 4.5 | 2.9 |
| 13 | 380 | 5.7 | 30 | 210 | 4.70 | 100 | 3.30 | 4.5 | 2.8 |
| 14 | 375 | 5.7 | 30 | 210 | 4.60 | 105 | 3.20 | 4.3 | 2.8 |
| 15 | 360 | 5.6 | 30 | 210 | 4.50 | 105 | 3.15 | 4.0 | 2.9 |
| 16 | 355 | 5.7 | 28 | 210 | 4.40 | 105 | 2.90 | 4.1 | 2.8 |
| 17 | 340 | 5.7 | 28 | 225 | 4.25 | 105 | 2.70 | 3.8 | 2.9 |
| 18 | 315 | 5.8 | 31 | 240 | 4.00 | 110 | 2.50 | 3.7 | 3.0 |
| 19 | (305) | 5.8 | 30 | 250 | 3.70 | 115 | 2.20 | 3.8 | 3.0 |
| 20 | | 5.8 | 30 | 260 | | 115 | 1.80 | 3.2 | 3.0 |
| 21 | | 5.7 | 30 | 255 | | 105 | 1.50 | 2.3 | 2.95 |
| 22 | | 5.2 | 31 | 255 | | 130 | 1.00 | 1.4 | 2.9 |
| 23 | | 5.0 | 29 | 260 | | 130 | ---- | 2.3 | 2.8 |

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.

Table 9

Churchill, Canada (58.8° N, 94.2° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.2 | 22 | 300 | | | | 5.2 | (2.8) |
| 01 | | 4.1 | 27 | 290 | | | | 4.5 | (2.9) |
| 02 | | 4.1 | 27 | 310 | | | | 4.8 | (2.8) |
| 03 | | 4.0 | 25 | 290 | | | --- | 3.8 | --- |
| 04 | | 4.0 | 24 | 295 | | | --- | >3.5 | --- |
| 05 | 370 | 4.1 | 24 | 280 | 3.2 | | 2.1 | 3.3 | (2.9) |
| 06 | 420 | 4.3 | 17 | 230 | 3.7 | | 2.4 | 3.5 | G |
| 07 | 540 | 4.4 | 16 | (235) | 4.0 | | --- | 4.4 | G |
| 08 | 570 | 4.5 | 17 | (260) | 4.1 | | --- | >4.0 | G |
| 09 | 490 | 4.8 | 19 | (220) | 4.3 | | 3.4 | 4.0 | 2.4 |
| 10 | 480 | 4.8 | 22 | 220 | 4.4 | | 3.3 | | 2.6 |
| 11 | 620 | 4.8 | 22 | 220 | 4.5 | | 3.4 | | 2.3 |
| 12 | 570 | 4.9 | 23 | 210 | 4.5 | | 3.4 | | 2.6 |
| 13 | 470 | 5.2 | 24 | 210 | 4.5 | | 3.4 | | 2.5 |
| 14 | 470 | 5.2 | 24 | 220 | 4.5 | | 3.4 | | 2.6 |
| 15 | 405 | 5.5 | 25 | 220 | 4.4 | | 3.3 | | 2.8 |
| 16 | 400 | 5.7 | 25 | 220 | 4.3 | | 3.1 | | 2.8 |
| 17 | 380 | 5.8 | 25 | 235 | 4.2 | | 3.0 | | 2.9 |
| 18 | 370 | 5.5 | 25 | 235 | 4.0 | | 2.8 | | 2.9 |
| 19 | 340 | 5.2 | 24 | 280 | 3.6 | | 2.7 | 3.3 | (2.9) |
| 20 | --- | 5.0 | 23 | 300 | --- | | 2.6 | 3.2 | 3.0 |
| 21 | | 4.6 | 23 | 290 | | | --- | 4.3 | (3.0) |
| 22 | | 4.6 | 21 | 300 | | | | 9.0 | (2.8) |
| 23 | | 4.3 | 22 | 290 | | | | 9.0 | (2.8) |

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 10

Inverness, Scotland (57.4° N, 4.2° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.4) | 31 | | | | | | (2.90) |
| 01 | | (4.0) | 30 | | | | | | (2.80) |
| 02 | | (3.7) | 29 | | | | | | (2.90) |
| 03 | | >3.2 | 30 | | | | | | 2.90 |
| 04 | | 4.0 | 27 | | | | | | 2.85 |
| 05 | | 4.2 | 30 | | | | | | 2.90 |
| 06 | | 4.6 | 28 | | | | | | 2.85 |
| 07 | | 4.6 | 30 | | | | | | 2.90 |
| 08 | | 4.8 | 31 | | | | | | 2.85 |
| 09 | | 5.3 | 30 | | | | | | 2.95 |
| 10 | | 5.6 | 26 | | | | | | 3.00 |
| 11 | | 5.6 | 26 | | | | | | 2.95 |
| 12 | | 5.6 | 27 | | | | | | 3.00 |
| 13 | | 5.5 | 30 | | | | | | 2.90 |
| 14 | | 5.5 | 30 | | | | | | 2.95 |
| 15 | | 5.7 | 27 | | | | | | 2.95 |
| 16 | | >5.7 | 21 | | | | | | 3.00 |
| 17 | | 5.8 | 27 | | | | | | 3.00 |
| 18 | | 5.8 | 28 | | | | | | 3.00 |
| 19 | | 5.8 | 29 | | | | | | 3.05 |
| 20 | | 5.9 | 29 | | | | | | 3.05 |
| 21 | | 5.6 | 29 | | | | | | 3.00 |
| 22 | | (5.3) | 31 | | | | | | 3.00 |
| 23 | | (4.9) | 31 | | | | | | ---- |

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 11

De Bilt, Holland (52.1° N, 5.2° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.7 | 29 | 300 | | | | | 2.75 |
| 01 | | 4.7 | 29 | 300 | | | | | 2.75 |
| 02 | | 4.3 | 29 | 300 | | | | | 2.80 |
| 03 | --- | 3.8 | 27 | 300 | --- | | | | 2.80 |
| 04 | (370) | 4.0 | 26 | 275 | --- | --- | 1.9 | 3.0 | 2.80 |
| 05 | 400 | 4.6 | 27 | 250 | 3.5 | 126 | 2.1 | 3.3 | 2.95 |
| 06 | 355 | 5.0 | 26 | 230 | 3.9 | 120 | 2.5 | 3.5 | 2.95 |
| 07 | 400 | 5.3 | 25 | 225 | 4.3 | 118 | 2.8 | 3.6 | 2.85 |
| 08 | 385 | 5.6 | 27 | 225 | 4.5 | 110 | 3.1 | 3.8 | 2.80 |
| 09 | 345 | 6.0 | 26 | 225 | 4.6 | 110 | 3.3 | 4.3 | 3.00 |
| 10 | 350 | 6.2 | 26 | 220 | 4.7 | 110 | 3.4 | 4.4 | 2.95 |
| 11 | 340 | 6.2 | 26 | 210 | 4.8 | 110 | 3.5 | 4.7 | 2.95 |
| 12 | 360 | 6.0 | 26 | 210 | 4.8 | 110 | 3.5 | 4.2 | 2.95 |
| 13 | 370 | 5.9 | 30 | 220 | 4.8 | 110 | 3.4 | 4.0 | 2.90 |
| 14 | 350 | 6.0 | 29 | 215 | 4.7 | 112 | 3.4 | 3.8 | 2.95 |
| 15 | 345 | 5.9 | 29 | 225 | 4.7 | 112 | 3.2 | 3.4 | 2.95 |
| 16 | 330 | 5.9 | 28 | 225 | 4.4 | 118 | 3.0 | 3.6 | 2.95 |
| 17 | 320 | 6.0 | 30 | 225 | 4.2 | 120 | 2.8 | <3.9 | 3.00 |
| 18 | 300 | 6.1 | 26 | 255 | --- | 126 | 2.3 | 4.8 | 3.00 |
| 19 | --- | 6.2 | 30 | 270 | | --- | 1.9 | 3.5 | 3.00 |
| 20 | | 6.3 | 30 | 265 | | | | 3.4 | 3.00 |
| 21 | | 6.1 | 30 | 270 | | | | | 2.95 |
| 22 | | 5.5 | 29 | 280 | | | | 2.4 | 2.85 |
| 23 | | 5.1 | 30 | 300 | | | | | 2.75 |

Time: 0.0°.
Sweep: 1.8 Mc to 18.0 Mc in 4 minutes.

Table 12

Adak, Alaska (51.9° N, 176.6° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.6) | 19 | 280 | | | | 3.2 | 2.85 |
| 01 | | 4.1 | 22 | 286 | | | | 2.3 | 2.82 |
| 02 | | (3.6) | 21 | 300 | | | | 2.8 | 2.75 |
| 03 | | 3.6 | 23 | 309 | | | | (3.0) | 2.80 |
| 04 | 370 | 3.8 | 27 | 280 | ---- | --- | ---- | >1.7 | 2.70 |
| 05 | 402 | 4.5 | 30 | 255 | 3.30 | 122 | ---- | 2.4 | 2.70 |
| 06 | 436 | 4.7 | 27 | (247) | 3.60 | 110 | (2.55) | 2.8 | 2.70 |
| 07 | 433 | 5.05 | 30 | <230 | 4.00 | 107 | 2.90 | 3.3 | 2.75 |
| 08 | 430 | 5.05 | 26 | (220) | 4.15 | 105 | (3.10) | 3.7 | 2.70 |
| 09 | 441 | 5.2 | 28 | 215 | 4.30 | 103 | 3.20 | 3.9 | 2.70 |
| 10 | 432 | 5.2 | 29 | (210) | 4.40 | 104 | (3.38) | 4.0 | 2.70 |
| 11 | 438 | 5.2 | 30 | (206) | 4.50 | 103 | (3.38) | 4.0 | 2.75 |
| 12 | 435 | 5.25 | 30 | 200 | 4.50 | 102 | 3.40 | 3.7 | 2.70 |
| 13 | 435 | 5.2 | 28 | 206 | 4.50 | 103 | (3.42) | 3.6 | 2.65 |
| 14 | 426 | 5.3 | 29 | 205 | 4.50 | 102 | 3.30 | 3.4 | 2.75 |
| 15 | 400 | >5.2 | 30 | 211 | 4.40 | 103 | 3.22 | | 2.88 |
| 16 | 398 | >5.1 | 30 | <220 | 4.30 | 104 | (3.00) | 3.1 | 2.85 |
| 17 | 359 | 5.1 | 31 | <235 | 4.10 | 106 | 2.80 | 3.0 | 2.95 |
| 18 | 313 | 5.25 | 30 | (253) | ---- | 105 | 2.45 | 3.3 | 3.00 |
| 19 | 286 | 5.3 | 29 | <260 | | 124 | ---- | 3.2 | 3.00 |
| 20 | | 5.65 | 28 | (270) | | | | 4.4 | 3.00 |
| 21 | | 5.95 | 28 | 266 | | | | 3.5 | 2.95 |
| 22 | | 5.6 | 26 | 262 | | | | 3.5 | 2.95 |
| 23 | | 5.0 | 25 | 265 | | | | 3.6 | 2.90 |

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 13

Dourbes, Belgium (50.1° N, 4.6° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.0 | 28 | 290 | | | | 1.6 | 2.85 |
| 01 | | 4.8 | 27 | 295 | | | | 1.2 | 2.80 |
| 02 | | 4.6 | 26 | 280 | | | | 1.4 | 2.80 |
| 03 | | 4.2 | 26 | 290 | | | | 1.4 | 2.80 |
| 04 | (410) | 4.0 | 29 | 285 | ---- | <130 | 1.30 | 1.8 | 2.90 |
| 05 | 370 | 4.6 | 29 | 250 | 3.50 | <121 | 2.00 | 2.5 | 2.95 |
| 06 | 370 | 5.1 | 27 | (240) | 3.80 | 113 | 2.40 | 3.2 | 3.00 |
| 07 | 385 | 5.2 | 27 | <250 | 4.10 | 109 | 2.80 | 3.6 | 2.90 |
| 08 | 370 | 5.6 | 28 | <255 | 4.25 | 105 | 3.10 | 4.0 | 2.90 |
| 09 | 370 | 6.1 | 25 | <230 | 4.50 | 105 | 3.20 | 4.0 | 3.00 |
| 10 | 360 | 6.2 | 27 | (220) | 4.65 | 105 | 3.35 | 4.0 | 3.00 |
| 11 | 350 | 6.0 | 24 | <225 | 4.70 | 105 | 3.40 | 3.9 | 2.95 |
| 12 | 350 | 6.1 | 26 | (220) | 4.80 | 105 | 3.50 | 3.9 | 3.00 |
| 13 | 375 | 6.0 | 27 | (220) | 4.70 | 105 | 3.45 | 3.8 | 2.90 |
| 14 | 350 | 6.1 | 31 | (220) | 4.60 | 105 | 3.40 | 3.6 | 3.05 |
| 15 | 340 | 5.9 | 30 | (230) | 4.50 | 105 | 3.25 | 3.5 | 3.00 |
| 16 | 330 | 6.0 | 29 | (240) | 4.25 | 107 | 3.05 | 3 6 | 3.00 |
| 17 | 320 | 6.0 | 28 | <250 | 4.00 | 109 | 2.70 | 3.7 | 3.10 |
| 18 | 305 | 6.4 | 27 | <280 | | (115) | 2.30 | 3.6 | 3.05 |
| 19 | --- | 6.4 | 28 | <275 | | <125 | 1.75 | 3.4 | 3.10 |
| 20 | | 6.8 | 29 | <265 | | 133 | <1.30 | 2.8 | 3.10 |
| 21 | | 6.4 | 31 | 260 | | | | 2.4 | 2.95 |
| 22 | | 5.8 | 28 | 270 | | | | 2.0 | 2.85 |
| 23 | | 5.4 | 28 | 295 | | | | 1.4 | 2.80 |

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 3 minutes.

Table 14

Pruhonice, Czechoslovakia (50.0° N, 14.6° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.2 | 28 | 280 | | --- | --- | | |
| 01 | | 4.8 | 31 | 290 | | --- | --- | 1.1 | |
| 02 | | 4.4 | 30 | 260 | | --- | --- | 2.0 | |
| 03 | | 4.3 | 30 | 270 | | --- | --- | 2.2 | |
| 04 | | 4.3 | 30 | 250 | | 110 | 2.0 | 2.1 | |
| 05 | | 4.8 | 28 | 235 | | 100 | 2.4 | 2.6 | |
| 06 | | 5.2 | 27 | 215 | | 100 | 2.7 | 3.2 | |
| 07 | | 5.7 | 24 | (205) | | 100 | 3.0 | 4.0 | |
| 08 | | 6.0 | 23 | (200) | | 95 | 3.2 | 4.1 | |
| 09 | | 6.4 | 25 | 200 | | 95 | 3.3 | 4.2 | |
| 10 | | 6.9 | 23 | 200 | | 95 | 3.3 | 4.1 | |
| 11 | | 6.3 | 26 | 200 | | 95 | 3.3 | 4.0 | |
| 12 | | 6.4 | 27 | 200 | | 90 | 3.5 | 4.0 | |
| 13 | | 6.2 | 31 | 200 | | 95 | 3.4 | 3.8 | |
| 14 | | 6.1 | 31 | 200 | | 95 | 3.4 | 3.8 | |
| 15 | | 6.1 | 30 | 210 | | 100 | 3.2 | 3.5 | |
| 16 | | 6.0 | 28 | 210 | | 100 | 3.0 | 3.8 | |
| 17 | | 6.2 | 29 | 220 | | 100 | 2.7 | 3.7 | |
| 18 | | 6.6 | 30 | 250 | | 105 | 2.1 | 3.9 | |
| 19 | | 6.5 | 29 | 250 | | 105 | 2.0 | 3.9 | |
| 20 | | 6.8 | 26 | 250 | | --- | --- | 3.8 | |
| 21 | | 6.6 | 28 | 250 | | --- | --- | | |
| 22 | | 6.0 | 25 | 250 | | --- | --- | | |
| 23 | | 5.6 | 27 | (275) | | --- | --- | | |

Time: 0.0°.
Sweep: 1.0 Mc to 18.0 Mc.

Table 15

Winnipeg, Canada (49.9° N, 97.4° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.2 | 24 | 300 | | | | 3.0 | 2.75 |
| 01 | | 3.2 | 27 | 310 | | | | 3.8 | 2.7 |
| 02 | | 3.3 | 25 | 320 | | | --- | 3.5 | 2.8 |
| 03 | | 3.4 | 22 | 310 | | | --- | 3.4 | 2.8 |
| 04 | | 3.2 | 23 | 300 | | | --- | 2.6 | 2.9 |
| 05 | --- | 3.4 | 22 | 290 | --- | | --- | | 2.9 |
| 06 | 460 | 4.0 | 20 | 240 | 3.4 | | 2.2 | | 2.8 |
| 07 | 435 | 4.2 | 22 | 220 | 3.8 | | 2.8 | | 2.6 |
| 08 | 460 | 4.5 | 18 | 210 | 4.0 | | 3.0 | | 2.65 |
| 09 | 470 | 4.9 | 16 | (200) | 4.3 | | 3.0 | | 2.7 |
| 10 | 440 | 5.1 | 19 | (200) | 4.4 | | 3.2 | | 2.65 |
| 11 | 415 | 5.1 | 17 | (200) | 4.5 | | 3.4 | | 2.8 |
| 12 | 470 | 5.2 | 16 | (210) | 4.5 | | --- | | 2.65 |
| 13 | 480 | 5.3 | 18 | (210) | 4.5 | | --- | | 2.6 |
| 14 | 470 | 5.2 | 22 | (220) | 4.5 | | 3.5 | | 2.5 |
| 15 | 400 | 5.4 | 22 | (210) | 4.5 | | 3.4 | | 2.7 |
| 16 | 390 | 5.4 | 23 | (220) | 4.5 | | 3.2 | | 2.8 |
| 17 | 365 | 5.5 | 24 | 210 | 4.3 | | 3.1 | | 2.85 |
| 18 | 330 | 5.6 | 27 | 240 | 4.0 | | 2.9 | | 2.9 |
| 19 | 300 | 5.8 | 26 | 260 | 3.5 | | 2.5 | | 2.9 |
| 20 | | 6.0 | 24 | 275 | | | 2.0 | 2.4 | 3.0 |
| 21 | | 5.8 | 25 | 270 | | | --- | 2.5 | 3.0 |
| 22 | | 5.0 | 25 | 260 | | | | 2.3 | 2.9 |
| 23 | | 3.9 | 26 | 285 | | | | | 2.8 |

Time: 90.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 16

St. John's, Newfoundland (47.6° N, 52.7° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.8 | 21 | 280 | | | | | 2.8 |
| 01 | | 3.3 | 22 | 280 | | | | | 2.8 |
| 02 | | 3.2 | 20 | 275 | | | | | 2.8 |
| 03 | | 3.0 | 18 | 265 | | | | | 3.0 |
| 04 | | 3.2 | 22 | 255 | | | | | 3.2 |
| 05 | G | 4.0 | 26 | 230 | 3.6 | | ---- | | 3.2 |
| 06 | 400 | 4.4 | 26 | 230 | 3.8 | | 2.60 | | 3.1 |
| 07 | 380 | 4.8 | 26 | 205 | 4.1 | | 2.95 | | 2.9 |
| 08 | 400 | 5.0 | 25 | 200 | 4.3 | | 3.10 | | 2.9 |
| 09 | 400 | 5.2 | 22 | 200 | 4.5 | | ---- | 3.5 | 2.9 |
| 10 | 400 | 5.3 | 22 | 200 | 4.5 | | ---- | | 2.8 |
| 11 | 405 | 5.4 | 24 | 205 | 4.6 | | ---- | | 2.85 |
| 12 | 400 | 5.5 | 23 | 205 | 4.6 | | ---- | | 2.7 |
| 13 | 415 | 5.4 | 22 | 205 | 4.6 | | ---- | | 2.8 |
| 14 | 380 | 5.6 | 25 | 205 | 4.5 | | 3.45 | | 2.9 |
| 15 | 390 | 5.5 | 27 | 205 | 4.5 | | 3.20 | | 2.8 |
| 16 | 365 | 5.6 | 29 | 225 | 4.2 | | 3.00 | | 2.9 |
| 17 | 320 | 6.0 | 29 | 230 | 4.0 | | ---- | 3.0 | 2.9 |
| 18 | <310 | 6.3 | 29 | 270 | --- | | | 3.3 | 3.0 |
| 19 | --- | 6.3 | 27 | 260 | | | | | 3.0 |
| 20 | | 6.1 | 27 | 260 | | | | | 2.9 |
| 21 | | (5.6) | 23 | 255 | | | | | (2.8) |
| 22 | | (5.0) | 23 | 270 | | | | | (2.9) |
| 23 | | (4.6) | 24 | 280 | | | | | 2.8 |

Time: 60.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 17

Graz, Austria (47.1° N, 15.5° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | >5.1 | 22 | 300 | | | | | |
| 01 | | 5.2 | 24 | 300 | | | | | |
| 02 | | (4.9) | 25 | 300 | | | | | |
| 03 | | (4.7) | 27 | 300 | | | | | |
| 04 | | (4.3) | 26 | 300 | | | | | |
| 05 | | 4.6 | 29 | <280 | | | | | |
| 06 | | 5.4 | 22 | 245 | >3.3 | | | 3.1 | |
| 07 | 350 | >5.5 | 25 | (260) | 4.1 | 130 | 2.9 | 3.5 | |
| 08 | 350 | >5.8 | 23 | | 4.5 | 130 | 3.1 | 3.5 | |
| 09 | 350 | 6.1 | 23 | | 4.6 | | | (4.0) | |
| 10 | 370 | 6.1 | 27 | | 4.7 | | | | |
| 11 | 360 | >5.9 | 23 | | 4.8 | | | 3.2 | |
| 12 | 350 | >5.8 | 22 | | 4.8 | | | (4.4) | |
| 13 | 360 | (6.1) | 24 | | 4.7 | | | | |
| 14 | 360 | (6.2) | 27 | | 4.8 | | | | |
| 15 | 335 | (6.2) | 26 | | 4.7 | | | 3.0 | |
| 16 | 330 | 6.2 | 29 | | 4.4 | (130) | (3.2) | | |
| 17 | 310 | 6.0 | 25 | | 4.3 | 130 | (2.9) | (3.8) | |
| 18 | 315 | 6.3 | 21 | <260 | | | | 3.1 | |
| 19 | | >6.5 | 25 | 280 | | | | 3.2 | |
| 20 | | >6.4 | 26 | 260 | | | | (2.6) | |
| 21 | | >5.9 | 20 | 270 | | | | (2.3) | |
| 22 | | >5.7 | 19 | 275 | | | | (2.4) | |
| 23 | | >5.6 | 23 | 300 | | | | 2.4 | |

Time: 15.0°E.
Sweep: 2.0 Mc to 13.0 Mc in 50 seconds.

Table 18

Ottawa, Canada (45.4° N, 75.9° W) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.0 | 29 | 280 | | | | | --- |
| 01 | | 3.2 | 30 | 300 | | | | 3.0 | --- |
| 02 | | 3.0 | 31 | 300 | | | | 3.3 | |
| 03 | | 2.9 | 30 | 310 | | | | 3.1 | |
| 04 | | 3.0 | 29 | 300 | | | | | --- |
| 05 | --- | 3.4 | 29 | 260 | --- | | 2.0 | | (3.0) |
| 06 | 465 | 4.1 | 29 | 240 | 3.7 | | 2.4 | 3.0 | (3.0) |
| 07 | 400 | 4.3 | 29 | 210 | 4.0 | | 2.8 | 4.0 | 2.9 |
| 08 | 450 | 4.8 | 30 | 200 | 4.2 | | 3.0 | 4.0 | 3.0 |
| 09 | 440 | 5.0 | 30 | 200 | 4.4 | | 3.2 | 3.7 | 2.9 |
| 10 | 405 | 5.2 | 29 | 200 | 4.5 | | 3.4 | 4.0 | 2.9 |
| 11 | 430 | 5.2 | 27 | 200 | 4.6 | | 3.7 | 4.0 | 2.9 |
| 12 | 410 | 5.2 | 28 | 200 | 4.6 | | 3.6 | 4.0 | 3.0 |
| 13 | 450 | 5.4 | 29 | 200 | 4.6 | | 3.7 | 4.2 | 2.8 |
| 14 | 450 | 5.4 | 30 | 210 | 4.5 | | 3.6 | 3.9 | 2.9 |
| 15 | 400 | 5.5 | 30 | 220 | 4.5 | | 3.4 | | 2.9 |
| 16 | 390 | 5.8 | 30 | 210 | 4.3 | | 3.2 | 3.2 | 2.9 |
| 17 | 360 | 6.0 | 30 | 230 | 4.1 | | 3.0 | 3.3 | 2.9 |
| 18 | 310 | 6.0 | 29 | 245 | (3.8) | | 2.6 | 4.3 | 3.0 |
| 19 | 280 | 6.1 | 30 | 260 | (3.0) | | 2.0 | 3.7 | 3.0 |
| 20 | | 6.2 | 31 | 265 | | | | 3.2 | 3.0 |
| 21 | | 6.0 | 30 | 260 | | | | 3.6 | --- |
| 22 | | 5.0 | 30 | 270 | | | | 3.0 | --- |
| 23 | | 4.7 | 30 | 285 | | | | | --- |

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 19

Formosa, China (25.0° N, 121.5° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.2 | 19 | <300 | | | | (2.9) | 2.80 |
| 01 | | (7.2) | 18 | 270 | | | | (2.6) | 2.85 |
| 02 | | 6.6 | 20 | 250 | | | | (2.6) | 2.90 |
| 03 | | 5.8 | 21 | 250 | | | | (2.9) | 3.00 |
| 04 | | 5.4 | 20 | 250 | | | | (2.8) | 3.00 |
| 05 | | (5.0) | 22 | 265 | | | | (3.0) | (3.00) |
| 06 | | 5.9 | 26 | 240 | | | | 2.8 | (3.20) |
| 07 | (280) | 6.5 | 26 | 225 | | <113 | ---- | 3.4 | 3.25 |
| 08 | 315 | 7.0 | 27 | (220) | --- | 109 | ---- | 3.9 | 3.00 |
| 09 | 320 | 7.0 | 29 | <220 | (4.8) | (109) | ---- | (4.5) | 2.90 |
| 10 | 360 | 7.5 | 27 | (210) | 5.0 | <109 | ---- | (5.4) | 2.70 |
| 11 | 365 | 8.1 | 27 | (210) | 4.9 | (109) | ---- | (6.0) | 2.70 |
| 12 | 370 | >8.5 | 29 | <240 | 5.0 | <111 | ---- | (5.2) | 2.75 |
| 13 | 370 | >9.0 | 30 | (220) | (5.0) | <111 | ---- | 4.7 | (2.65) |
| 14 | 350 | 10.0 | 29 | (230) | 4.8 | <109 | ---- | 4.8 | 2.80 |
| 15 | 330 | 10.4 | 29 | <250 | 4.6 | (107) | ---- | 4.6 | 2.85 |
| 16 | 310 | 11.0 | 29 | (230) | (4.6) | <111 | ---- | (5.1) | 3.00 |
| 17 | 285 | >9.5 | 27 | (230) | --- | --- | ---- | (5.1) | 3.00 |
| 18 | <265 | >9.2 | 29 | 245 | --- | | | (3.9) | 3.05 |
| 19 | | >8.9 | 28 | 245 | | | | 3.0 | 3.00 |
| 20 | | 7.4 | 28 | 275 | | | | (2.7) | 2.75 |
| 21 | | >6.8 | 28 | 290 | | | | | (2.70) |
| 22 | | >6.9 | 26 | 310 | | | | | 2.65 |
| 23 | | 7.0 | 22 | 305 | | | | (2.5) | 2.70 |

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 20

Baguio, P. I. (16.4° N, 120.6° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (6.4) | 22 | 330 | | | | 2.0 | (2.70) |
| 01 | | (7.0) | 23 | 300 | | | | 2.2 | (2.85) |
| 02 | | (6.2) | 24 | 295 | | | | | (2.80) |
| 03 | | 5.3 | 24 | 290 | | | | | 2.80 |
| 04 | | 4.6 | 22 | 280 | | | | | 3.05 |
| 05 | | 3.8 | 25 | <280 | | | | 2.5 | 3.00 |
| 06 | | 5.5 | 31 | 270 | | 140 | (1.90) | 2.8 | 3.00 |
| 07 | --- | 7.1 | 31 | <260 | | 123 | (2.60) | 4.3 | 3.00 |
| 08 | --- | 7.5 | 31 | <240 | | 121 | (3.15) | 5.1 | 2.75 |
| 09 | 400 | 8.0 | 29 | <245 | --- | 121 | (3.50) | 4.6 | 2.50 |
| 10 | 400 | 8.5 | 30 | 230 | (4.9) | 121 | (3.65) | 5.0 | 2.40 |
| 11 | 450 | 9.1 | 29 | 225 | (5.0) | 121 | (3.85) | 4.9 | 2.35 |
| 12 | 450 | 9.6 | 29 | (225) | 5.0 | 119 | (3.90) | 4.3 | 2.45 |
| 13 | 425 | 10.1 | 29 | <230 | (5.0) | 119 | (3.80) | 4.3 | 2.45 |
| 14 | 420 | 10.2 | 30 | <230 | (4.8) | 121 | (3.65) | 4.4 | (2.45) |
| 15 | 400 | >10.1 | 30 | (230) | (4.6) | 121 | (3.40) | 4.2 | (2.60) |
| 16 | 370 | (10.4) | 31 | (245) | --- | (122) | >3.10 | 4.1 | (2.60) |
| 17 | 335 | >10.0 | 30 | (260) | | (125) | (2.65) | 4.0 | (2.70) |
| 18 | --- | >10.0 | 31 | 280 | | 135 | (1.95) | 3.1 | (2.70) |
| 19 | | >9.5 | 31 | 290 | | | | 2.7 | (2.70) |
| 20 | | (9.0) | 29 | 310 | | | | 2.3 | (2.65) |
| 21 | | (7.8) | 29 | 340 | | | | 2.5 | (2.60) |
| 22 | | >7.0 | 22 | 360 | | | | 2.0 | (2.55) |
| 23 | | (6.8) | 21 | 370 | | | | | (2.60) |

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 21

Singapore, British Malaya (1.3° N, 103.8° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.7 | 22 | | | | | 1.8 | 3.10 |
| 01 | | 7.0 | 21 | | | | | 2.6 | 3.30 |
| 02 | | 5.5 | 21 | | | | | 3.0 | 3.30 |
| 03 | | 4.5 | 18 | | | | | 2.4 | 3.20 |
| 04 | | 3.3 | 18 | | | | | 2.5 | 3.20 |
| 05 | | 2.6 | 17 | | | | | 2.7 | 3.15 |
| 06 | | 4.0 | 25 | | | 125 | 1.30 | 2.2 | 3.10 |
| 07 | | 7.3 | 29 | | | 115 | 2.35 | 3.2 | 3.15 |
| 08 | --- | 9.4 | 31 | --- | --- | 110 | 3.00 | 3.6 | 3.05 |
| 09 | 315 | 10.6 | 28 | --- | (4.7) | 105 | 3.30 | 4.0 | 2.90 |
| 10 | 330 | 11.0 | 31 | | (4.8) | 105 | 3.55 | 3.9 | 2.65 |
| 11 | 340 | 11.4 | 29 | --- | 4.9 | 105 | 3 70 | | 2.45 |
| 12 | 350 | 11.0 | 27 | 220 | 4.9 | 105 | 3.75 | | 2.55 |
| 13 | 330 | 11.1 | 30 | 225 | 4.8 | 105 | 3.70 | | 2.45 |
| 14 | 330 | 10.8 | 27 | 230 | 4.8 | 105 | 3.65 | | 2.40 |
| 15 | 345 | 10.8 | 31 | 230 | (4.6) | 105 | 3.40 | 3.4 | 2.40 |
| 16 | 325 | 10.7 | 29 | 215 | --- | 110 | 3.10 | 3.5 | 2.50 |
| 17 | --- | 10.8 | 26 | 225 | | 110 | 2.50 | 3.0 | 2.65 |
| 18 | --- | 10.6 | 20 | | | 150 | 1.90 | 2.6 | 2.85 |
| 19 | | 10.7 | 21 | | | --- | ---- | 2.5 | 3.15 |
| 20 | | 10.3 | 23 | | | | | 2.8 | 3.20 |
| 21 | | 9.4 | 26 | | | | | 2.2 | 3.40 |
| 22 | | 8.3 | 26 | | | | | 2.6 | 3.30 |
| 23 | | 7.6 | 24 | | | | | 2.5 | 3.05 |

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 22

Brisbane, Australia (27.5° S, 152.9° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.5 | 25 | | | | | 2.0 | 2.75 |
| 01 | | 3.7 | 24 | | | | | 2.1 | 2.80 |
| 02 | | 3.7 | 27 | | | | | 2.1 | 2.80 |
| 03 | | 3.7 | 25 | | | | | 2.6 | 2.80 |
| 04 | | 3.5 | 28 | | | | | 2.8 | (2.80) |
| 05 | | 3.2 | 29 | | | | | 2.7 | (2.85) |
| 06 | | 3.0 | 30 | | | | | | 2.85 |
| 07 | | 5.5 | 30 | | | | | | 3.30 |
| 08 | | 6.5 | 30 | | | | | | 3.25 |
| 09 | | 7.4 | 30 | | | | | 3.0 | 3.25 |
| 10 | | 7.6 | 30 | | | | | 3.6 | 3.30 |
| 11 | | 7.4 | 30 | | | | 3.25 | 3.6 | 3.20 |
| 12 | | 7.4 | 30 | | | | 3.30 | 3.8 | 3.10 |
| 13 | | 7.5 | 29 | | | | 3.20 | 4.0 | 3.15 |
| 14 | | 7.5 | 29 | | | | | 4.4 | 3.00 |
| 15 | | 7.3 | 31 | | | | | 3.8 | 3.20 |
| 16 | | 7.0 | 31 | | | | | 3.9 | 3.20 |
| 17 | | 6.4 | 31 | | | | | 3.5 | 3.20 |
| 18 | | 5.0 | 31 | | | | | 3.3 | 3.00 |
| 19 | | 4.5 | 31 | | | | | 2.5 | 2.85 |
| 20 | | 3.7 | 28 | | | | | 1.9 | 2.80 |
| 21 | | 3.6 | 22 | | | | | | 2.70 |
| 22 | | 3.7 | 24 | | | | | | 2.80 |
| 23 | | 3.6 | 21 | | | | | 2.0 | 2.80 |

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 23

Mundaring, W. Australia (32.0° S, 116.2° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.2 | 25 | 280 | | | | | 3.10 |
| 01 | | 3.2 | 25 | <270 | | | | | 3.15 |
| 02 | | 3.0 | 25 | (270) | | | | | 3.20 |
| 03 | | 3.2 | 25 | (260) | | | | | 3.20 |
| 04 | | 3.0 | 22 | (250) | | | | | 3.25 |
| 05 | | 2.7 | 24 | 245 | | | | | 3.35 |
| 06 | | 2.4 | 26 | (250) | | | | | 3.20 |
| 07 | | 3.5 | 28 | 250 | | | | | 3.20 |
| 08 | | 6.0 | 27 | 225 | | | (2.20) | | 3.55 |
| 09 | | 6.5 | 24 | 225 | --- | | 2.60 | | 3.50 |
| 10 | | 7.0 | 21 | 230 | --- | | 2.90 | | 3.40 |
| 11 | | 7.0 | 26 | 215 | 4.5 | | 3.05 | 3.4 | 3.40 |
| 12 | | 7.5 | 22 | 220 | 4.5 | | 3.10 | 3.8 | 3.40 |
| 13 | | 7.0 | 22 | 220 | 4.4 | | 3.10 | 3.6 | <3.40 |
| 14 | | 7.3 | 23 | 220 | --- | | 3.00 | 3.7 | 3.35 |
| 15 | | 7.3 | 22 | 230 | 4.0 | | 2.80 | 3.8 | 3.35 |
| 16 | | 7.3 | 24 | 230 | --- | | 2.35 | 3.0 | 3.40 |
| 17 | | 7.0 | 26 | 220 | | | 2.00 | | 3.40 |
| 18 | | 5.3 | 21 | 210 | | | | | 3.40 |
| 19 | | 3.6 | 25 | <225 | | | | | 3.30 |
| 20 | | 3.2 | 27 | 235 | | | | | 3.35 |
| 21 | | 3.0 | 24 | (250) | | | | | 3.20 |
| 22 | | 3.0 | 24 | <280 | | | | | 3.05 |
| 23 | | >3.1 | 23 | 270 | | | | | 3.10 |

Time: 120.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 18 seconds.

Table 24

Canberra, Australia (35.3° S, 149.0° E) July 1961

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.0 | 21 | | | | | 2.3 | 2.90 |
| 01 | | 2.9 | 21 | | | | | 3.0 | 2.90 |
| 02 | | 3.0 | 17 | | | | | 3.4 | 2.90 |
| 03 | | 3.4 | 18 | | | | | 3.1 | 3.00 |
| 04 | | 3.1 | 19 | | | | | 2.6 | 3.05 |
| 05 | | 3.5 | 17 | | | | | 2 8 | 3.20 |
| 06 | | 2.4 | 16 | | | | | | 3.05 |
| 07 | | 3.6 | 22 | | | | | | 3.20 |
| 08 | | 5.6 | 23 | | | | | | 3.40 |
| 09 | | 6.4 | 20 | | | | | | 3.40 |
| 10 | | 6.5 | 14 | | | | | 3.2 | 3.35 |
| 11 | | 6.8 | 12 | | | | | 3.5 | 3.35 |
| 12 | | 7.0 | 12 | | | | | 3.8 | 3.30 |
| 13 | | 7.1 | 12 | | | | | | 3.20 |
| 14 | | 7.0 | 11 | | | | | 3.2 | 3.40 |
| 15 | | 6.9 | 12 | | | | | 3.8 | 3.30 |
| 16 | | 6.7 | 13 | | | | | | 3.35 |
| 17 | | 6.2 | 26 | | | | | | 3.25 |
| 18 | | 5.3 | 27 | | | | | 2.1 | 3.15 |
| 19 | | 4.4 | 27 | | | | | 2.6 | 3.20 |
| 20 | | 3.8 | 25 | | | | | | 3.10 |
| 21 | | 3.3 | 26 | | | | | | 2.90 |
| 22 | | 3.4 | 26 | | | | | | 2.90 |
| 23 | | 3.1 | 21 | | | | | | 2.85 |

Time: 150.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 25

Hobart, Tasmania (42.9° S, 147.2° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 2.0 | 20 | | | | | 3.5 | 3.05 |
| 01 | | 2.0 | 19 | | | | | 2.8 | (3.00) |
| 02 | | 1.9 | 19 | | | | | 2.9 | (3.00) |
| 03 | | 2.0 | 22 | | | | | 2.9 | 3.00 |
| 04 | | 2.1 | 24 | | | | | | 3.10 |
| 05 | | 2.1 | 24 | | | | | | 3.20 |
| 06 | | 2.0 | 21 | | | | | | 3.15 |
| 07 | | 2.2 | 23 | | | | | | (3.05) |
| 08 | | 4.3 | 23 | | | | | | 3.55 |
| 09 | | 5.4 | 23 | | | | | | 3.60 |
| 10 | | 6.1 | 26 | | | | | 3.0 | 3.60 |
| 11 | | 6.4 | 26 | | | | | 3.4 | 3.50 |
| 12 | | 6.8 | 26 | | | | | 3.3 | 3.50 |
| 13 | | 7.0 | 26 | | | | | 4.0 | 3.60 |
| 14 | | 7.2 | 27 | | | | | 3.0 | 3.55 |
| 15 | | 6.8 | 28 | | | | | | 3.40 |
| 16 | | 6.8 | 27 | | | | | | 3.55 |
| 17 | | 6.0 | 28 | | | | | | 3.45 |
| 18 | | 5.2 | 28 | | | | | | 3.35 |
| 19 | | 3.9 | 25 | | | | | | 3.30 |
| 20 | | 3.1 | 25 | | | | | | 3.20 |
| 21 | | 2.6 | 25 | | | | | | 3.15 |
| 22 | | 2.3 | 25 | | | | | | 3.10 |
| 23 | | 2.2 | 22 | | | | | 2.3 | 3.00 |

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 26

Christchurch, New Zealand (43.6° S, 172.8° E) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 2.7 | 15 | (290) | | | | <2.2 | 2.65 |
| 01 | | 2.8 | 11 | (300) | | | | 2.8 | 2.70 |
| 02 | | (2.6) | 16 | (290) | | | | <1.8 | 2.75 |
| 03 | | (2.9) | 21 | (270) | | | | <2.0 | (2.75) |
| 04 | | (2.3) | 21 | (260) | | | | <1.4 | 2.85 |
| 05 | | (2.1) | 19 | (260) | | | | <1.7 | 2.90 |
| 06 | | (2.1) | 18 | (260) | | | | <1.5 | (3.05) |
| 07 | | (2.0) | 22 | --- | | | | <1.4 | 2.95 |
| 08 | | 3.9 | 28 | 250 | | --- | (1.8) | | 3.20 |
| 09 | | 5.0 | 28 | 230 | | 110 | 2.3 | 2.6 | 3.40 |
| 10 | --- | 5.8 | 28 | 230 | | (105) | 2.6 | 3.0 | 3.30 |
| 11 | 260 | 6.2 | 29 | 230 | --- | (105) | 2.8 | 3.1 | 3.25 |
| 12 | 260 | 6.8 | 27 | 230 | --- | 110 | 2.9 | 3.5 | 3.25 |
| 13 | 260 | 7.0 | 27 | 220 | --- | 110 | 3.0 | 3.4 | 3.25 |
| 14 | 260 | 7.0 | 29 | 230 | (4.0) | 105 | 2.9 | 3.2 | 3.20 |
| 15 | 250 | 6.8 | 28 | 220 | --- | 110 | 2.7 | 3.0 | 3.30 |
| 16 | (230) | 6.7 | 31 | 230 | | 105 | 2.4 | 2.6 | 3.25 |
| 17 | | 5.6 | 30 | 230 | | --- | (1.8) | <1.9 | 3.20 |
| 18 | | 4.8 | 29 | 240 | | --- | --- | <1.8 | 2.90 |
| 19 | | 4.4 | 30 | 250 | | | | <1.7 | 2.95 |
| 20 | | 3.5 | 28 | 260 | | | | <1.7 | 2.80 |
| 21 | | 3.2 | 24 | 260 | | | | <1.7 | 2.75 |
| 22 | | 3.1 | 23 | --- | | | | <1.8 | 2.70 |
| 23 | | 3.1 | 17 | --- | | | | <1.8 | 2.70 |

Time: 180.0°E.
Sweep: 1.0 Mc to 22.0 Mc in 7 seconds.

Table 27

Falkland Is. (51.7° S, 57.8° W) July 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 2.6 | 17 | 340 | | | | (1.6) | ---- |
| 01 | | 2.7 | 21 | 330 | | | | | (2.60) |
| 02 | | 2.8 | 22 | 310 | | | | | 2.70 |
| 03 | | 2.8 | 24 | 300 | | | | | 2.80 |
| 04 | | 2.7 | 21 | 300 | | | | | 2.70 |
| 05 | | 2.6 | 20 | 280 | | | | | (2.85) |
| 06 | | 2.4 | 16 | 255 | | | | | (3.05) |
| 07 | | 2.4 | 23 | 255 | | --- | ---- | | ---- |
| 08 | | 4.4 | 17 | 210 | | 155 | ---- | (2.2) | ---- |
| 09 | 215 | 5.2 | 18 | 210 | | 130 | ---- | 2.6 | ---- |
| 10 | 220 | 5.8 | 14 | 215 | | 110 | ---- | 2.8 | ---- |
| 11 | 230 | 7.9 | 13 | 225 | | 110 | ---- | 2.9 | (3.60) |
| 12 | 235 | 6.8 | 10 | 220 | | 110 | ---- | 3.1 | (3.65) |
| 13 | 245 | (6.0) | 8 | 220 | | 110 | ---- | 2.8 | ---- |
| 14 | 225 | (6.4) | 9 | 215 | | 110 | ---- | 2.6 | ---- |
| 15 | 210 | 5.6 | 12 | 210 | | 120 | ---- | 2.3 | ---- |
| 16 | | (5.6) | 6 | 210 | | 165 | E | 2.2 | ---- |
| 17 | | 3.8 | 14 | 210 | | --- | ---- | 1.7 | ---- |
| 18 | | 3.0 | 19 | 250 | | 170 | | (1.7) | (3.00) |
| 19 | | 2.8 | 20 | 250 | | | | (2.2) | ---- |
| 20 | | 2.7 | 20 | 255 | | | | | ---- |
| 21 | | 2.7 | 23 | 290 | | | | | ---- |
| 22 | | 2.4 | 20 | 310 | | | | | (2.60) |
| 23 | | 2.6 | 22 | 320 | | | | | (2.60) |

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 28

Inverness, Scotland (57.4° N, 4.2° W) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | >4.9 | 30 | | | | | | (2.95) |
| 01 | | >4.8 | 28 | | | | | | (2.90) |
| 02 | | 4.7 | 29 | | | | | | 2.85 |
| 03 | | 4.4 | 30 | | | | | | 2.85 |
| 04 | | 4.7 | 28 | | | | | | 2.85 |
| 05 | | >4.8 | 29 | | | | | | 2.90 |
| 06 | | 5.3 | 29 | | | | | | 2.90 |
| 07 | | 5.5 | 27 | | | | | | 2.90 |
| 08 | | 5.7 | 29 | | | | | | 2.90 |
| 09 | | 6.0 | 29 | | | | | | 2.95 |
| 10 | | 6.0 | 27 | | | | | | 2.95 |
| 11 | | 5.9 | 29 | | | | | | 2.90 |
| 12 | | 5.9 | 28 | | | | | | 2.95 |
| 13 | | 6.1 | 26 | | | | | | 2.95 |
| 14 | | 6.0 | 28 | | | | | | 2.90 |
| 15 | | 5.8 | 28 | | | | | | 2.90 |
| 16 | | 6.0 | 29 | | | | | | 2.95 |
| 17 | | 6.0 | 26 | | | | | | 2.90 |
| 18 | | 6.2 | 29 | | | | | | 3.00 |
| 19 | | 6.4 | 26 | | | | | | 3.00 |
| 20 | | 6.2 | 30 | | | | | | 3.00 |
| 21 | | (6.3) | 29 | | | | | | (3.00) |
| 22 | | >5.7 | 29 | | | | | | (3.00) |
| 23 | | >5.8 | 27 | | | | | | (2.95) |

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 29

Wakkanai, Japan (45.4° N, 141.7° E) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.8 | 24 | 295 | | | | (2.4) | 2.90 |
| 01 | | 5.6 | 25 | 295 | | | | (2.2) | 2.85 |
| 02 | | 5.4 | 25 | 285 | | | | (2.8) | 2.85 |
| 03 | | 5.4 | 24 | 290 | | | | (2.3) | 2.90 |
| 04 | --- | 5.5 | 26 | 275 | --- | | 1.50 | | 2.90 |
| 05 | 350 | 6.3 | 27 | 250 | 3.4 | | 2.15 | 3.0 | 2.85 |
| 06 | 330 | 6.2 | 27 | 250 | 4.1 | | 2.65 | 4.3 | 2.95 |
| 07 | 350 | 6.4 | 26 | (245) | 4.3 | | 3.00 | (5.3) | 2.90 |
| 08 | 350 | 5.8 | 24 | (225) | 4.4 | | 3.10 | (5.3) | 2.90 |
| 09 | 370 | 5.8 | 21 | (230) | 4.6 | | 3.25 | (5.9) | 2.95 |
| 10 | 385 | 5 9 | 18 | (210) | 4.7 | | 3.30 | (5.8) | 2.90 |
| 11 | 390 | 6.1 | 17 | (230) | 4.8 | | 3.30 | (6.4) | 2.85 |
| 12 | 390 | 6.0 | 19 | 235 | 4.8 | | 3.25 | (6.0) | 2.85 |
| 13 | 420 | 6.0 | 23 | 230 | (4.7) | | 3.30 | 5.0 | 2.80 |
| 14 | 385 | 6.2 | 26 | (225) | 4.6 | | 3.20 | (5.0) | 2.85 |
| 15 | 370 | 6.2 | 27 | 230 | 4.5 | | 3.05 | (4.8) | 2.90 |
| 16 | 360 | 6.0 | 26 | 240 | 4.3 | | 3.00 | 4.6 | 2.90 |
| 17 | 330 | 6.0 | 27 | 250 | 4.1 | | 2.70 | (5.0) | 3.00 |
| 18 | 310 | 6.2 | 27 | 255 | --- | | 2.10 | (5.3) | 2.95 |
| 19 | | 6.8 | 27 | (275) | | | | (5.1) | 2.90 |
| 20 | | 6.9 | 27 | 265 | | | | (5.0) | 2.90 |
| 21 | | 6.8 | 28 | 275 | | | | (4.5) | 2.85 |
| 22 | | 6.3 | 26 | 285 | | | | (4.6) | 2.85 |
| 23 | | 6.2 | 24 | 290 | | | | (3.3) | 2.80 |

Time: 135.0°E.
Sweep: 1.0 Mc to 18.0 Mc in 1 minute.

Table 30

Akita, Japan (39.7° N, 140.1° E) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.8 | 12 | 295 | | | | (4.8) | 2.70 |
| 01 | | 5.6 | 14 | 290 | | | | (3.3) | 2.80 |
| 02 | | 5.4 | 13 | 295 | | | | (3.0) | 2.85 |
| 03 | | 5.1 | 14 | 290 | | | | (3.4) | 2.80 |
| 04 | | 5.3 | 19 | 280 | | | | (2.7) | 2.85 |
| 05 | 305 | 5.6 | 27 | 250 | --- | | 2.00 | (2.8) | 2.90 |
| 06 | 305 | 6.0 | 28 | 245 | 4.0 | | 2.60 | 3.8 | 2.95 |
| 07 | 340 | 6.4 | 26 | (245) | (4.2) | | 2.95 | (5.6) | 2.90 |
| 08 | 320 | 6.8 | 20 | --- | 4.6 | | ---- | (6.0) | 3.05 |
| 09 | (345) | 6.3 | 17 | (240) | --- | | ---- | (7.1) | 3.00 |
| 10 | 345 | 6.3 | 15 | --- | (4.6) | | ---- | (6.0) | 2.80 |
| 11 | 395 | 6.2 | 20 | (220) | 4.6 | | ---- | (5.7) | 2.80 |
| 12 | 395 | 6.4 | 23 | (225) | 4.9 | | ---- | (6.1) | 2.80 |
| 13 | 380 | 6.4 | 26 | (220) | (4.8) | | ---- | (6.5) | 2.90 |
| 14 | 360 | 6.5 | 28 | (220) | 4.6 | | ---- | (6.3) | 2.90 |
| 15 | 355 | 6.4 | 27 | (245) | 4.6 | | 3.35 | (5.4) | 2.90 |
| 16 | 340 | 6.3 | 29 | 245 | 4.3 | | 3.05 | (4.9) | 3.00 |
| 17 | 320 | 6.4 | 29 | (245) | 4.1 | | 2.60 | (6.0) | 2.95 |
| 18 | 295 | 6.7 | 29 | (255) | --- | | ---- | (6.0) | 3.00 |
| 19 | | 6.8 | 28 | 280 | | | | (5.0) | 3.00 |
| 20 | | 7.0 | 22 | 290 | | | | (5.6) | 2.80 |
| 21 | | 6.8 | 16 | 295 | | | | (5.0) | 2.80 |
| 22 | | 6.2 | 12 | 290 | | | | (5.0) | 2.80 |
| 23 | | (6.3) | 9 | 290 | | | | (3.6) | (2.75) |

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 31

Tokyo, Japan (35.7° N, 139.5° E) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 6.2 | 26 | <340 | | | | (5.0) | 2.70 |
| 01 | | 6.1 | 26 | 300 | | | | (4.1) | 2.75 |
| 02 | | (6.0) | 28 | 290 | | | | (4.2) | (2.80) |
| 03 | | (5.7) | 27 | 300 | | | | (3.0) | (2.75) |
| 04 | | (5.4) | 28 | 290 | | | | (2.8) | (2.80) |
| 05 | (355) | 5.5 | 30 | 260 | --- | | 1.90 | (3.2) | 2.95 |
| 06 | 310 | 6.2 | 30 | (250) | --- | | 2.50 | 3.8 | 2.95 |
| 07 | 325 | (6.7) | 27 | 250 | (4.6) | | (2.85) | 4.9 | (2.95) |
| 08 | (310) | 6.7 | 24 | (250) | --- | | 3.15 | (6.3) | 2.90 |
| 09 | 340 | (6.7) | 19 | (245) | --- | | 3.30 | 6.8 | 2.90 |
| 10 | (370) | (6.3) | 17 | (250) | --- | | (3.50) | (7.0) | (2.75) |
| 11 | <400 | (6.6) | 19 | (240) | --- | | (3.55) | (7.7) | (2.65) |
| 12 | 390 | 6.6 | 21 | (240) | --- | | (3.60) | (8.0) | 2.70 |
| 13 | 355 | 6.7 | 23 | (245) | 4.8 | | 3.65 | 6.8 | 2.80 |
| 14 | 355 | 7.1 | 24 | 250 | 4.6 | | 3.50 | 6.8 | 2.80 |
| 15 | 350 | 7.0 | 24 | 245 | 4.8 | | 3.40 | 5.8 | 2.80 |
| 16 | <350 | 7.0 | 27 | (250) | 4.4 | | 3.10 | 6.3 | 2.85 |
| 17 | 310 | 7.2 | 28 | 250 | 4.1 | | (2.70) | (5.6) | 2.90 |
| 18 | 300 | 7.3 | 30 | 255 | | | (2.00) | (5.0) | 2.90 |
| 19 | | 7.2 | 30 | <300 | | | | (5.8) | 2.95 |
| 20 | | 7.2 | 30 | (300) | | | | (5.4) | 2.80 |
| 21 | | (6.6) | 30 | (330) | | | | (5.2) | (2.70) |
| 22 | | 6.7 | 26 | (340) | | | | (5.3) | 2.70 |
| 23 | | 6.5 | 26 | 315 | | | | (5.4) | 2.70 |

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 32

Yamagawa, Japan (31.2° N, 130.6° E) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (7.4) | 8 | 325 | | | | (5.1) | (2.70) |
| 01 | | (7.2) | 8 | 300 | | | | (5.2) | (2.90) |
| 02 | | (7.5) | 9 | 290 | | | | (4.4) | (2.95) |
| 03 | | (6.2) | 15 | 275 | | | | (3.8) | (3.00) |
| 04 | | 5.1 | 17 | 290 | | | | (3.7) | 2.90 |
| 05 | | 4.6 | 17 | 290 | | | ---- | (2.6) | 3.00 |
| 06 | --- | 5.8 | 28 | 255 | | | 2.00 | 3.2 | 3.20 |
| 07 | (290) | 6.6 | 29 | 250 | --- | | 2.60 | (5.1) | 3.20 |
| 08 | 290 | 6.5 | 26 | 250 | 4.3 | | 3.05 | (6.0) | 3.15 |
| 09 | 320 | 6.3 | 25 | 245 | 4.7 | | 3.30 | (7.0) | 3.05 |
| 10 | 380 | 6.6 | 23 | 240 | 5.0 | | 3.45 | (6.6) | 2.80 |
| 11 | 410 | 6.9 | 23 | (220) | (5.0) | | 3.55 | 8.1 | 2.80 |
| 12 | 400 | 7.4 | 25 | 220 | 5.0 | | 3.60 | (6.8) | 2.70 |
| 13 | 370 | 8.0 | 26 | (230) | 4.9 | | 3.65 | (8.4) | 2.75 |
| 14 | 360 | 8.0 | 28 | 250 | 5.0 | | 3.60 | (6.0) | 2.75 |
| 15 | 350 | 8.4 | 30 | 250 | 4.7 | | 3.40 | (5.6) | 2.75 |
| 16 | 335 | 8.8 | 30 | 245 | 4.6 | | 3.30 | (5.4) | 2.85 |
| 17 | 310 | 8.9 | 29 | 250 | 4.4 | | 3.00 | (5.9) | 2.95 |
| 18 | 290 | 8.8 | 29 | 250 | (3.9) | | 2.35 | (5.3) | 3.05 |
| 19 | --- | 8.0 | 28 | 260 | | | ---- | (5.4) | 3.05 |
| 20 | | (7.5) | 27 | 270 | | | | (4.9) | (2.90) |
| 21 | | (6.8) | 25 | 305 | | | | (5.1) | (2.75) |
| 22 | | 6.8 | 16 | 325 | | | | (5.0) | 2.70 |
| 23 | | (6.4) | 14 | 320 | | | | (5.0) | (2.80) |

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 30 seconds.

Table 33

Singapore, British Malaya (1.3° N, 103.8° E) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.1 | 24 | 240 | | | | 2.8 | 3.15 |
| 01 | | 4.8 | 21 | 250 | | | | 1.8 | 3.05 |
| 02 | | 4.1 | 20 | 245 | | | | 1.5 | 3.25 |
| 03 | --- | 3.7 | 19 | 250 | --- | | | | 3.20 |
| 04 | | 3.0 | 17 | 245 | | | | 2.1 | 3.35 |
| 05 | | 3.0 | 14 | 250 | | | | 1.9 | 3.25 |
| 06 | --- | 4.3 | 21 | 265 | --- | 175 | ---- | 1.4 | 3.15 |
| 07 | --- | 7.5 | 25 | 230 | --- | 120 | 2.40 | 3.1 | 3.15 |
| 08 | 300 | 9.3 | 21 | 220 | (4.2) | 110 | 2.95 | 3.8 | 3.00 |
| 09 | 305 | 10.4 | 22 | 205 | (4.8) | 105 | 3.30 | 4.0 | 2.90 |
| 10 | 330 | 11.0 | 23 | 200 | (4.8) | 105 | 3.60 | 3.7 | 2.75 |
| 11 | 335 | 10.6 | 20 | 200 | 4.9 | 105 | 3.70 | 4.0 | 2.40 |
| 12 | 340 | 10.3 | 22 | 200 | 4.9 | 105 | 3.80 | 4.0 | 2.40 |
| 13 | 355 | 9.6 | 21 | 195 | 4.8 | 105 | 3.70 | | 2.35 |
| 14 | 345 | 9.9 | 23 | 200 | 4.8 | 105 | 3.50 | 3.7 | 2.50 |
| 15 | 320 | 9.8 | 19 | 200 | (4.6) | 110 | 3.30 | 3.4 | 2.70 |
| 16 | 255 | 10.2 | 19 | 215 | 4.0 | 110 | 3.05 | 3.4 | 2.80 |
| 17 | --- | 10.3 | 19 | 235 | --- | 115 | 2.40 | 3.0 | 2.90 |
| 18 | | 9.9 | 18 | 250 | --- | --- | ---- | 3.0 | 3.10 |
| 19 | | 9.5 | 16 | 245 | | | | 2.7 | 3.20 |
| 20 | | 8.8 | 20 | 230 | | | | 2.5 | 3.45 |
| 21 | | 7.4 | 19 | 220 | | | | 2.8 | 3.35 |
| 22 | | 5.8 | 21 | 225 | | | | 3.0 | 3.20 |
| 23 | | 5.6 | 22 | 240 | | | | 2.8 | 3.15 |

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 34

Falkland Is. (51.7° S, 57.8° W) June 1961

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 2.6 | 22 | 340 | | | | | (2.70) |
| 01 | | 2.6 | 20 | 315 | | | | | ---- |
| 02 | | 2.7 | 21 | 315 | | | | | ---- |
| 03 | | 2.7 | 20 | 310 | | | | | (2.60) |
| 04 | | 2.7 | 21 | 295 | | | | | ---- |
| 05 | | 2.6 | 22 | 270 | | | | | ---- |
| 06 | | 2.6 | 20 | 230 | | --- | --- | | ---- |
| 07 | | 2.4 | 18 | 250 | | --- | --- | | ---- |
| 08 | | 4.1 | 16 | 215 | | 155 | --- | (2.3) | ---- |
| 09 | | 5.1 | 10 | 210 | | 125 | --- | (2.6) | ---- |
| 10 | | 5.8 | 10 | 210 | | 115 | --- | 2.9 | ---- |
| 11 | | 6.0 | 11 | 215 | | 110 | --- | 2.8 | ---- |
| 12 | | (6.3) | 9 | 225 | | 110 | --- | 2.9 | ---- |
| 13 | | 6.6 | 10 | 210 | | 110 | --- | 2.8 | ---- |
| 14 | | (6.1) | 7 | 220 | | 110 | --- | 2.6 | |
| 15 | | 5.6 | 11 | 210 | | 135 | --- | (2.6) | ---- |
| 16 | | 4.4 | 10 | 210 | | --- | E | 2.2 | ---- |
| 17 | | 3.1 | 10 | 210 | | --- | --- | (1.8) | (3.20) |
| 18 | | 2.7 | 13 | 240 | | | | | ---- |
| 19 | | 2.3 | 17 | 245 | | | | | ---- |
| 20 | | 2.4 | 18 | 260 | | | | 2.1 | ---- |
| 21 | | 2.5 | 19 | 270 | | | | | ---- |
| 22 | | 2.5 | 21 | 315 | | | | | (2.80) |
| 23 | | 2.5 | 19 | 340 | | | | 1.9 | ---- |

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automstic operation.

Table 35

Thule, Greenland (76.0° N, 68.0° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | (413) | (5.25) | 22 | 240 | ---- | 119 | 2.25 | 3.4 | (2.80) |
| 01 | (462) | (5.4) | 25 | 240 | (3.50) | 117 | 2.30 | 3.1 | (2.80) |
| 02 | (590) | (5.2) | 25 | 240 | (3.60) | 118 | 2.35 | 3.0 | (2.85) |
| 03 | 470 | (5.2) | 25 | 229 | (3.70) | 115 | 2.40 | 3.5 | (2.70) |
| 04 | 525 | (5.1) | 23 | 229 | (3.80) | 110 | 2.55 | 3.7 | (3.00) |
| 05 | 468 | (5.0) | 23 | 224 | (3.90) | 110 | 2.70 | 3.8 | (2.70) |
| 06 | 438 | (5.1) | 24 | 222 | (4.10) | 110 | 2.90 | 3.6 | (2.75) |
| 07 | 460 | (5.0) | 25 | 218 | 4.25 | 108 | 3.00 | 3.5 | (2.62) |
| 08 | 520 | (5.2) | 25 | 216 | 4.30 | 105 | 3.00 | 4.2 | (2.60) |
| 09 | 442 | (5.35) | 24 | 215 | (4.40) | 105 | 3.10 | 4.0 | (2.70) |
| 10 | 520 | (5.2) | 25 | 210 | 4.45 | 105 | 3.20 | 4.4 | (2.52) |
| 11 | 489 | (5.25) | 24 | 210 | 4.50 | 105 | 3.15 | 4.6 | (2.50) |
| 12 | 484 | (5.3) | 22 | 208 | (4.50) | 105 | 3.20 | 4.7 | (2.62) |
| 13 | 445 | (5.3) | 21 | 209 | (4.60) | 105 | 3.15 | 5.2 | (2.65) |
| 14 | 481 | (5.5) | 22 | 209 | 4.50 | 108 | 3.15 | 5.4 | (2.60) |
| 15 | 436 | (5.35) | 24 | 215 | (4.40) | 105 | 3.10 | 5.2 | (2.60) |
| 16 | 410 | (5.7) | 23 | 216 | 4.30 | 109 | 3.00 | 4.6 | (2.65) |
| 17 | 408 | (5.6) | 26 | 219 | (4.20) | 110 | 2.90 | 4.1 | (2.72) |
| 18 | 400 | (5.6) | 25 | 222 | (4.00) | 112 | 2.75 | 4.0 | (2.70) |
| 19 | 417 | (5.2) | 24 | 227 | (4.00) | 115 | 2.68 | 3.5 | (2.70) |
| 20 | (432) | (5.25) | 26 | 230 | (3.90) | 115 | 2.55 | 2.8 | (2.85) |
| 21 | (392) | (5.2) | 23 | <235 | (3.55) | 117 | 2.40 | 3.6 | (2.75) |
| 22 | (400) | (5.2) | 23 | <240 | ---- | 118 | 2.30 | 3.0 | (2.80) |
| 23 | (410) | (5.45) | 22 | 246 | ---- | 118 | 2.25 | 2.5 | (2.80) |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 36

Point Barrow, Alaska (71.3° N, 156.8° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.9) | 22 | | | | | 4.8 | (2.80) |
| 01 | | (4.8) | 23 | | | | | 4.1 | (2.80) |
| 02 | | (4.7) | 23 | | | | | 4.4 | (2.70) |
| 03 | | (5.05) | 10 | | | | | 4.4 | (2.80) |
| 04 | | (4.75) | 16 | | | | | 4.9 | (2.65) |
| 05 | | 4.65 | 18 | | | | | 3.7 | 2.55 |
| 06 | | (5.0) | 15 | | | | | 4.0 | (2.45) |
| 07 | | 5.0 | 18 | | | | | | 2.35 |
| 08 | | 5.0 | 19 | | | | | | 2.20 |
| 09 | | 5.0 | 25 | | | | | 3.3 | 2.30 |
| 10 | | 5.3 | 25 | | | | | 4.0 | 2.45 |
| 11 | | 5.2 | 27 | | | | | | 2.35 |
| 12 | | 5.45 | 26 | | | | | 3.9 | 2.40 |
| 13 | | 5.4 | 28 | | | | | 3.5 | 2.50 |
| 14 | | 5.6 | 30 | | | | | 3.8 | 2.52 |
| 15 | | 5.7 | 31 | | | | | | 2.55 |
| 16 | | 5.7 | 31 | | | | | | 2.60 |
| 17 | | 5.8 | 29 | | | | | | 2.60 |
| 18 | | 5.7 | 28 | | | | | | 2.70 |
| 19 | | 5.4 | 26 | | | | | | 2.70 |
| 20 | | 5.2 | 27 | | | | | 3.0 | 2.80 |
| 21 | | 5.3 | 27 | | | | | 3.8 | 2.88 |
| 22 | | (5.1) | 25 | | | | | 3.5 | (2.80) |
| 23 | | (5.0) | 21 | | | | | 4.7 | (2.85) |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 37

Godhavn, Greenland (69.3° N, 53.5° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (5.0) | 25 | | --- | (147) | (1.95) | | 2.85 |
| 01 | | 4.6 | 28 | | (3.0) | (153) | 1.95 | | 2.85 |
| 02 | | (4.6) | 27 | | (3.0) | 137 | (2.00) | | 2.82 |
| 03 | | (4.8) | 24 | | (3.0) | (136) | (2.00) | | 2.90 |
| 04 | | (4.9) | 22 | | (3.4) | 119 | (2.20) | | (2.80) |
| 05 | | (5.0) | 19 | | (3.7) | 109 | (2.50) | | 2.82 |
| 06 | | (4.7) | 19 | | (3.9) | 105 | (2.70) | | (2.85) |
| 07 | | (4.8) | 15 | | (4.0) | 101 | 2.90 | | G |
| 08 | | 5.15 | 12 | | (4.2) | (101) | (3.00) | | G |
| 09 | | (5.45) | 10 | | (4.3) | 101 | (3.15) | | ---- |
| 10 | | (5.7) | 13 | | (4.5) | 101 | 3.40 | | (2.90) |
| 11 | | (5.95) | 18 | | (4.6) | (101) | 3.40 | | (2.70) |
| 12 | | (6.0) | 20 | | (4.6) | 101 | (3.40) | | 2.70 |
| 13 | | 5.9 | 19 | | (4.6) | 101 | (3.30) | | 2.75 |
| 14 | | (6.0) | 18 | | (4.7) | 101 | (3.30) | | 2.75 |
| 15 | | (5.75) | 20 | | (4.7) | 101 | (3.28) | 4.6 | 2.78 |
| 16 | | (5.45) | 20 | | 4.5 | 101 | (3.05) | 5.2 | (2.80) |
| 17 | | 5.2 | 24 | | (4.4) | 101 | (3.00) | 4.3 | 2.60 |
| 18 | | 5.15 | 28 | | (4.3) | (107) | (2.80) | 3.8 | 2.75 |
| 19 | | (5.1) | 29 | | (4.0) | (113) | (2.60) | 3.3 | 2.80 |
| 20 | | (5.0) | 27 | | (3.7) | <125 | (2.40) | | 2.90 |
| 21 | | 5.2 | 28 | | (3.6) | (127) | (2.25) | | 2.85 |
| 22 | | 4.95 | 28 | | (3.4) | (142) | (2.00) | | 2.80 |
| 23 | | (5.0) | 28 | | --- | 151 | (2.00) | | 2.85 |

Time: 45.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 18 seconds.

Table 38

Fairbanks, Alaska (64.9° N, 147.8° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.7) | 15 | | | | | 4.4 | (2.80) |
| 01 | | (4.9) | 11 | | | | | 5.2 | (2.68) |
| 02 | | (4.8) | 11 | | | | | 5.0 | (2.72) |
| 03 | | (5.0) | 9 | | | | | 4.8 | (2.70) |
| 04 | | (5.5) | 12 | | | | | 4.5 | (2.65) |
| 05 | | 5.1 | 14 | | | | | 4.5 | 2.62 |
| 06 | | (5.7) | 13 | | | | | 4.1 | 2.65 |
| 07 | | 5.7 | 15 | | | | | 3.2 | 2.48 |
| 08 | | 5.4 | 18 | | | | | 3.2 | 2.45 |
| 09 | | 5.45 | 18 | | | | | | 2.50 |
| 10 | | 5.2 | 22 | | | | | | 2.30 |
| 11 | | 5.55 | 22 | | | | | 3.6 | 2.50 |
| 12 | | 5.5 | 26 | | | | | 3.6 | 2.50 |
| 13 | | 5.6 | 25 | | | | | | 2.45 |
| 14 | | 5.5 | 25 | | | | | | 2.50 |
| 15 | | 5.65 | 22 | | | | | | 2.62 |
| 16 | | 5.6 | 23 | | | | | | 2.60 |
| 17 | | 5.8 | 26 | | | | | 3.2 | 2.70 |
| 18 | | (5.8) | 27 | | | | | 3.1 | 2.75 |
| 19 | | 5.7 | 24 | | | | | 2.9 | 2.90 |
| 20 | | 5.5 | 21 | | | | | 3.0 | 2.95 |
| 21 | | (5.1) | 21 | | | | | 2.6 | (2.98) |
| 22 | | (4.9) | 17 | | | | | 3.0 | 2.90 |
| 23 | | (4.7) | 19 | | | | | 3.8 | (2.80) |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 39

Reykjavik, Iceland (64.1° N, 21.8° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | >4.9 | 10 | 350 | | --- | ---- | 3.7 | (2.80) |
| 01 | | >4.75 | 10 | 355 | | --- | ---- | 3.5 | (2.75) |
| 02 | | (4.85) | 10 | (360) | | --- | ---- | 3.8 | (2.75) |
| 03 | | (4.95) | 8 | (320) | | --- | ---- | 3.9 | (2.70) |
| 04 | --- | 5.0 | 13 | 310 | --- | --- | ---- | 3.5 | 2.90 |
| 05 | (410) | 5.3 | 15 | 260 | 3.5 | 105 | 2.40 | | 2.78 |
| 06 | (550) | 5.05 | 16 | 240 | 3.9 | 103 | 2.70 | | 2.75 |
| 07 | 400 | 5.2 | 16 | 230 | 4.2 | 106 | 3.00 | | 2.92 |
| 08 | 450 | 5.4 | 20 | 220 | 4.5 | 101 | 3.10 | | 2.75 |
| 09 | 400 | 5.75 | 20 | 220 | 4.7 | 101 | 3.20 | | 2.85 |
| 10 | 400 | 5.8 | 21 | 220 | 4.8 | 103 | 3.40 | | 2.75 |
| 11 | 450 | 5.8 | 27 | 220 | 4.8 | 107 | 3.45 | | 2.65 |
| 12 | 420 | 6.0 | 26 | 220 | 4.9 | 105 | (3.50) | | 2.65 |
| 13 | <450 | 6.0 | 26 | 220 | 4.9 | 108 | (3.50) | | 2.70 |
| 14 | 470 | 5.9 | 26 | 215 | 4.9 | 104 | 3.50 | | 2.70 |
| 15 | 425 | 6.0 | 28 | 220 | 4.9 | 107 | 3.40 | | 2.70 |
| 16 | 430 | 5.9 | 26 | (220) | 4.7 | 109 | 3.30 | | 2.70 |
| 17 | 380 | 6.0 | 24 | 230 | 4.6 | 109 | 3.20 | | 2.80 |
| 18 | 390 | 5.8 | 26 | 240 | 4.3 | 109 | 3.05 | | 2.90 |
| 19 | (400) | 5.75 | 22 | 260 | --- | <117 | 3.30 | | 2.90 |
| 20 | --- | 5.2 | 25 | 290 | --- | 115 | (3.00) | | 2.90 |
| 21 | --- | (5.3) | 21 | 305 | | 115 | 3.00 | | 2.78 |
| 22 | | >4.9 | 16 | 310 | | 119 | ---- | 2.9 | 2.82 |
| 23 | | (4.9) | 11 | 350 | | 125 | 2.60 | 3.8 | (2.80) |

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 40

Anchorage, Alaska (61.2° N, 149.9° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.05) | 24 | | | | | 2.1 | (2.68) |
| 01 | | (3.9) | 22 | | | --- | ---- | 2.7 | (2.60) |
| 02 | | (4.2) | 23 | | | 127 | 1.50 | 2.1 | (2.60) |
| 03 | | (4.3) | 25 | | --- | 115 | 1.65 | 2.2 | (2.60) |
| 04 | | (4.6) | 25 | 3.2 | | 113 | 2.00 | 2.1 | (2.55) |
| 05 | | 5.0 | 27 | 3.6 | | 113 | 2.40 | 2.5 | 2.52 |
| 06 | | 5.35 | 24 | 3.8 | | 110 | 2.60 | 2.6 | 2.55 |
| 07 | | 5.4 | 26 | 4.2 | | 107 | 2.90 | 3.0 | 2.50 |
| 08 | | 5.55 | 26 | 4.3 | | 107 | (3.02) | 3.1 | 2.50 |
| 09 | | 5.7 | 22 | 4.5 | | 105 | 3.30 | 3.5 | 2.60 |
| 10 | | 5.4 | 25 | 4.6 | | 105 | 3.30 | 3.4 | 2.45 |
| 11 | | 5.6 | 25 | 4.7 | | 105 | 3.35 | 3.8 | 2.50 |
| 12 | | 5.7 | 26 | 4.7 | | 106 | 3.45 | 3.6 | 2.48 |
| 13 | | 5.5 | 23 | 4.8 | | 107 | 3.52 | 3.6 | 2.38 |
| 14 | | 5.5 | 25 | 4.7 | | 105 | (3.40) | 3.5 | 2.55 |
| 15 | | 5.55 | 26 | 4.7 | | 109 | 3.25 | | 2.55 |
| 16 | | 5.75 | 24 | 4.5 | | 107 | 3.12 | | 2.60 |
| 17 | | 5.7 | 24 | 4.3 | | 108 | 2.90 | | 2.70 |
| 18 | | 5.65 | 24 | --- | | 111 | 2.72 | 3.3 | 2.85 |
| 19 | | 5.6 | 28 | --- | | 115 | 2.50 | 2.9 | 2.85 |
| 20 | | 5.6 | 27 | | | 128 | 2.08 | 2.4 | 2.90 |
| 21 | | 5.5 | 25 | | | 139 | 1.85 | 1.8 | 2.92 |
| 22 | | (5.0) | 27 | | | --- | ---- | 2.7 | (2.85) |
| 23 | | (4.5) | 23 | | | | | 2.0 | (2.75) |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 41

Narssarssuaq, Greenland (61.2° N, 45.4° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (4.6) | 12 | | | | | 4.5 | (2.65) |
| 01 | | (4.05) | 12 | | | | | 4.2 | (2.62) |
| 02 | | (4.1) | 13 | | | | | 3.5 | (2.60) |
| 03 | | (4.3) | 10 | | | 105 | ---- | 4.0 | (2.72) |
| 04 | | 4.3 | 11 | | | 105 | (2.90) | 3.6 | 3.00 |
| 05 | | 4.4 | 15 | | --- | 99 | 2.85 | 4.1 | 2.90 |
| 06 | | 4.75 | 20 | | 3.9 | 103 | 3.00 | 4.0 | 2.75 |
| 07 | | 5.1 | 24 | | 4.4 | 101 | 3.20 | | 2.65 |
| 08 | | 5.0 | 22 | | 4.6 | 99 | 3.40 | | 2.60 |
| 09 | | 5.4 | 25 | | 4.6 | 99 | 3.50 | | 2.55 |
| 10 | | 5.55 | 26 | | 4.7 | 99 | 3.50 | | 2.60 |
| 11 | | 5.6 | 29 | | 4.8 | 99 | 3.70 | | 2.60 |
| 12 | | 5.9 | 30 | | 4.9 | 99 | 3.60 | | 2.55 |
| 13 | | 6.0 | 29 | | 4.8 | 97 | 3.60 | | 2.65 |
| 14 | | 6.1 | 27 | | 4.9 | 99 | 3.50 | | 2.65 |
| 15 | | 6.0 | 27 | | 4.8 | 98 | 3.40 | | 2.65 |
| 16 | | 5.8 | 26 | | 4.7 | 99 | 3.30 | | 2.65 |
| 17 | | 6.0 | 23 | | (4.5) | 99 | 3.15 | 3.3 | 2.80 |
| 18 | | 5.8 | 27 | | 4.0 | 101 | (3.00) | 3.6 | 2.78 |
| 19 | | 5.4 | 25 | | --- | 103 | (2.95) | 3.4 | 2.90 |
| 20 | | (5.4) | 26 | | | 116 | 2.80 | 3.5 | (2.80) |
| 21 | | (4.95) | 22 | | | 115 | ---- | 3.6 | (2.80) |
| 22 | | (5.2) | 13 | | | --- | ---- | 4.4 | (2.80) |
| 23 | | (4.8) | 17 | | | --- | ---- | 5.3 | (2.80) |

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 42

Adak, Alaska (51.9° N, 176.6° W) July 1960

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.3 | 27 | 284 | | | | | 2.70 |
| 01 | | 4.95 | 28 | 293 | | | | | 2.65 |
| 02 | | 4.7 | 29 | 305 | | | | | 2.60 |
| 03 | | 4.3 | 31 | 335 | | | | | 2.60 |
| 04 | 432 | 4.6 | 31 | 293 | 2.85 | 133 | ---- | 1.9 | 2.55 |
| 05 | 434 | 5.2 | 31 | 260 | 3.60 | 110 | (2.20) | 2.6 | 2.50 |
| 06 | 450 | 5.8 | 31 | <239 | 4.05 | 105 | 2.70 | 3.2 | 2.45 |
| 07 | 451 | 5.9 | 31 | (240) | 4.30 | 102 | 3.05 | 3.9 | 2.50 |
| 08 | 434 | 6.0 | 27 | (232) | 4.50 | 100 | 3.30 | 4.1 | 2.60 |
| 09 | 480 | 6.1 | 29 | (226) | 4.80 | 100 | (3.45) | 4.3 | 2.60 |
| 10 | 466 | 6.0 | 29 | (221) | 4.90 | 100 | >3.55 | 4.4 | 2.55 |
| 11 | 464 | 6.1 | 29 | (215) | 5.00 | 100 | >3.60 | 4.4 | 2.60 |
| 12 | 467 | 6.0 | 29 | 209 | 5.00 | 100 | >3.60 | 4.2 | 2.58 |
| 13 | 498 | 5.8 | 30 | 208 | 5.00 | 100 | >3.60 | 4.0 | 2.50 |
| 14 | 500 | 5.7 | 31 | 213 | 4.95 | 100 | (3.50) | 3.8 | 2.50 |
| 15 | 452 | 5.8 | 31 | 217 | 4.90 | 100 | (3.40) | 3.7 | 2.65 |
| 16 | 430 | 5.8 | 31 | 225 | 4.75 | 100 | 3.25 | >3.4 | 2.75 |
| 17 | 400 | 5.8 | 31 | 235 | 4.45 | 104 | 3.00 | 3.2 | 2.85 |
| 18 | (350) | 5.9 | 31 | <254 | ---- | 108 | 2.60 | 3.3 | 2.90 |
| 19 | --- | 6.0 | 30 | (272) | | 117 | >2.10 | 3.0 | 2.90 |
| 20 | | 6.3 | 31 | 275 | | 120 | ---- | 3.7 | 2.90 |
| 21 | | 6.5 | 29 | 265 | | | | 3.5 | 2.80 |
| 22 | | 6.35 | 30 | 272 | | | | 3.1 | 2.80 |
| 23 | | 5.9 | 27 | 275 | | | | 2.5 | 2.80 |

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 43

Boulder, Colorado (40.0° N, 105.3° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.1 | 21 | | | | | | 2.70 |
| 01 | | 4.9 | 21 | | | | | | 2.70 |
| 02 | | 4.3 | 22 | | | | | | 2.65 |
| 03 | | 4.2 | 22 | | | | | | 2.70 |
| 04 | | 3.85 | 22 | | | | | | 2.68 |
| 05 | | 4.0 | 23 | | | | | | 2.75 |
| 06 | | 4.95 | 24 | | | | | 2.6 | 2.70 |
| 07 | | 5.5 | 24 | | | | | 3.3 | 2.60 |
| 08 | | 5.95 | 24 | | | | | 3.8 | 2.70 |
| 09 | | 6.1 | 23 | | | | | 4.1 | 2.55 |
| 10 | | 6.35 | 24 | | | | | 4.0 | 2.65 |
| 11 | | 6.4 | 23 | | | | | 4.2 | 2.55 |
| 12 | | 6.6 | 21 | | | | | 4.2 | 2.60 |
| 13 | | 6.5 | 23 | | | | | 4.0 | 2.65 |
| 14 | | 6.5 | 25 | | | | | 4.0 | 2.70 |
| 15 | | 6.6 | 24 | | | | | 3.8 | 2.70 |
| 16 | | 6.5 | 24 | | | | | 4.0 | 2.75 |
| 17 | | 6.5 | 25 | | | | | 3.4 | 2.80 |
| 18 | | 6.8 | 23 | | | | | 3.0 | 2.90 |
| 19 | | 7.0 | 23 | | | | | 3.3 | 3.00 |
| 20 | | 6.6 | 23 | | | | | 3.2 | 2.95 |
| 21 | | 6.5 | 22 | | | | | 3.0 | 2.85 |
| 22 | | 5.65 | 22 | | | | | 3.1 | 2.85 |
| 23 | | 5.3 | 23 | | | | | 1.7 | 2.70 |

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 44

White Sands, New Mexico (32.3° N, 106.5° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.5 | 30 | <305 | | | | 2.7 | 2.60 |
| 01 | | 5.6 | 31 | 310 | | | | 2.2 | 2.60 |
| 02 | | 5.4 | 31 | 301 | | | | 2.4 | 2.65 |
| 03 | | 5.3 | 31 | 300 | | | | 2.7 | 2.70 |
| 04 | | 5.0 | 31 | 310 | | | | 2.5 | 2.65 |
| 05 | | 4.55 | 30 | 307 | | --- | ---- | 1.9 | 2.75 |
| 06 | 433 | 5.5 | 31 | 250 | 3.60 | 115 | 2.40 | 2.7 | 2.78 |
| 07 | 400 | 6.4 | 31 | <235 | 4.20 | 108 | (3.00) | 3.5 | 2.65 |
| 08 | 408 | 7.2 | 31 | (218) | 4.60 | 106 | ---- | 4.2 | 2.65 |
| 09 | 414 | 7.6 | 29 | 207 | 4.90 | 102 | 3.55 | 4.2 | 2.65 |
| 10 | 425 | 7.5 | 29 | (210) | 5.10 | 102 | (3.85) | 4.6 | 2.50 |
| 11 | 406 | 7.75 | 28 | (206) | 5.30 | 105 | ---[1] | 4.6 | 2.60 |
| 12 | 418 | 7.6 | 28 | 215 | 5.25 | 104 | (3.90) | 4.4 | 2.60 |
| 13 | 386 | 7.95 | 26 | 215 | 5.20 | 103 | ---- | 4.3 | 2.65 |
| 14 | 400 | 7.7 | 29 | 215 | 5.20 | 107 | (3.85) | 4.2 | 2.65 |
| 15 | 388 | 7.5 | 30 | 220 | 5.00 | 106 | (3.70) | 4.0 | 2.70 |
| 16 | 372 | 7.6 | 29 | 222 | 4.80 | 105 | (3.50) | 3.8 | 2.72 |
| 17 | 332 | 7.4 | 30 | 241 | 4.35 | 108 | (3.00) | 3.6 | 2.80 |
| 18 | (305) | 7.5 | 31 | (244) | | 114 | ---- | 3.5 | 2.85 |
| 19 | | 7.4 | 31 | 268 | | --- | ---- | 2.9 | 2.90 |
| 20 | | 7.0 | 31 | 260 | | | | 3.0 | 2.85 |
| 21 | | 6.4 | 31 | (275) | | | | 3.4 | 2.70 |
| 22 | | 6.05 | 30 | (288) | | | | 3.4 | 2.65 |
| 23 | | 5.7 | 30 | 300 | | | | 3.2 | 2.65 |

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 45

Grand Bahama I. (26.6° N, 78.2° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 6.9 | 30 | 285 | | | | 2.6 | 2.75 |
| 01 | | 6.7 | 29 | <273 | | | | 2.3 | 2.75 |
| 02 | | 6.05 | 30 | 260 | | | | 2.4 | 2.80 |
| 03 | | 5.8 | 27 | 268 | | | | 2.4 | 2.80 |
| 04 | | 5.3 | 26 | 278 | | | | 2.2 | 2.70 |
| 05 | | 5.1 | 27 | 292 | | | | | 2.80 |
| 06 | --- | 5.7 | 29 | 263 | --- | <120 | 2.15 | 2.2 | 2.85 |
| 07 | 375 | 6.5 | 31 | 230 | 4.2 | 110 | 2.75 | 3.2 | 2.85 |
| 08 | 350 | 7.4 | 29 | 219 | 4.6 | 105 | 3.30 | 4.0 | 2.80 |
| 09 | 350 | 7.4 | 27 | <215 | 4.9 | 105 | 3.55 | 4.0 | 2.70 |
| 10 | 425 | 7.4 | 29 | (205) | 5.2 | 105 | 3.80 | 4.7 | 2.65 |
| 11 | 372 | 8.3 | 28 | 205 | 5.4 | 105 | 3.98 | 4.5 | 2.65 |
| 12 | 375 | 8.7 | 27 | (222) | 5.5 | 105 | 4.00 | 4.8 | 2.65 |
| 13 | 385 | 8.7 | 29 | (212) | 5.5 | 105 | 4.00 | 4.3 | 2.68 |
| 14 | 350 | 8.7 | 29 | 213 | 5.3 | 105 | 4.00 | 4.2 | 2.72 |
| 15 | 368 | 8.45 | 30 | <220 | 5.2 | 108 | 3.78 | 4.2 | 2.70 |
| 16 | 360 | 8.5 | 28 | (225) | 4.8 | 109 | 3.50 | 4.1 | 2.72 |
| 17 | 330 | 8.45 | 28 | (230) | 4.6 | 109 | 3.10 | 3.9 | 2.80 |
| 18 | 298 | 8.0 | 30 | <248 | | 111 | 2.50 | 3.2 | 2.88 |
| 19 | | 7.9 | 28 | 250 | | --- | ---- | 2.8 | 2.80 |
| 20 | | 7.55 | 28 | 250 | | | | 2.9 | 2.75 |
| 21 | | 7.0 | 29 | 265 | | | | 2.5 | 2.70 |
| 22 | | >6.8 | 30 | 280 | | | | 2.4 | 2.70 |
| 23 | | 6.7 | 30 | 295 | | | | 2.6 | 2.65 |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 46

Maui, Hawaii (20.8° N, 156.5° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.8 | 29 | <300 | | | | 2.7 | 2.72 |
| 01 | | 7.5 | 29 | 290 | | | | 2.1 | 2.80 |
| 02 | | 7.5 | 29 | 275 | | | | 2.2 | 2.85 |
| 03 | | 6.8 | 29 | 275 | | | | | 2.85 |
| 04 | | 6.3 | 29 | 295 | | | | | 2.80 |
| 05 | | 6.1 | 29 | 305 | | | | | 2.75 |
| 06 | --- | 5.75 | 30 | 280 | --- | --- | ---- | | 2.80 |
| 07 | 285 | 6.9 | 31 | 240 | --- | 113 | 2.60 | 3.1 | 2.95 |
| 08 | 510 | 7.2 | 31 | 220 | 4.9 | 107 | 3.20 | 3.8 | 2.60 |
| 09 | <455 | 7.9 | 31 | 210 | 5.2 | 107 | 3.60 | 4.5 | 2.40 |
| 10 | 450 | 9.0 | 31 | 205 | 5.6 | 107 | 3.80 | 4.4 | 2.35 |
| 11 | 430 | 9.7 | 31 | 200 | 5.5 | 107 | 3.95 | 4.2 | 2.45 |
| 12 | 405 | 10.3 | 31 | 210 | 5.5 | 107 | 4.05 | 4.5 | 2.50 |
| 13 | 390 | 10.6 | 31 | 205 | 5.5 | 107 | 4.05 | 4.4 | 2.60 |
| 14 | 370 | 11.1 | 31 | 215 | 5.4 | 107 | 3.98 | 4.4 | 2.65 |
| 15 | 350 | 11.3 | 31 | 220 | 5.3 | 107 | 3.80 | 4.2 | 2.75 |
| 16 | 335 | 11.4 | 31 | 225 | 5.1 | 109 | 3.55 | 4.0 | 2.80 |
| 17 | 310 | 11.4 | 31 | 230 | 4.8 | 110 | 3.15 | 3.8 | 2.90 |
| 18 | 285 | 11.0 | 31 | 240 | | 115 | 2.60 | 3.9 | 3.00 |
| 19 | | 10.9 | 31 | 260 | | | | 3.2 | 3.00 |
| 20 | | 9.5 | 31 | <260 | | | | 3.1 | 2.90 |
| 21 | | 8.7 | 31 | 275 | | | | 2.7 | 2.75 |
| 22 | | 8.7 | 29 | 285 | | | | 2.8 | 2.70 |
| 23 | | 8.1 | 29 | 305 | | | | 2.2 | 2.70 |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0° Mc in 13.5 seconds.

Table 47

Baguio, P. I. (16.4° N, 120.6° E) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (9.6) | 27 | 310 | | | | | (2.80) |
| 01 | | 9.3 | 29 | 280 | | | | | 2.88 |
| 02 | | 7.95 | 30 | 270 | | | | | 2.90 |
| 03 | | 7.4 | 30 | 265 | | | | | 2.90 |
| 04 | | 6.05 | 28 | 265 | | | | | 2.95 |
| 05 | | 5.05 | 28 | 260 | | | | | 2.90 |
| 06 | | 6.75 | 28 | 275 | | --- | ---- | 2.9 | 3.00 |
| 07 | | 8.3 | 31 | 255 | | (129) | 2.90 | 3.3 | 2.90 |
| 08 | --- | 8.8 | 31 | (240) | --- | <128 | (3.40) | 4.1 | 2.70 |
| 09 | --- | 9.2 | 31 | <240 | --- | <123 | (3.65) | 4.3 | 2.35 |
| 10 | --- | 9.8 | 31 | (230) | --- | --- | ---- | 4.3 | 2.28 |
| 11 | 430 | 10.3 | 31 | <235 | (5.8) | --- | ---- | >4.5 | (2.28) |
| 12 | 450 | (10.6) | 31 | <250 | (5.7) | --- | ---- | | (2.30) |
| 13 | 460 | 10.7 | 31 | <240 | (5.6) | --- | ---- | 4.3 | 2.30 |
| 14 | 460 | 10.8 | 31 | <240 | (5.5) | --- | ---- | | (2.25) |
| 15 | 435 | 11.0 | 31 | (235) | (5.6) | <123 | ---- | 4.0 | 2.35 |
| 16 | 390 | >11.0 | 31 | (250) | --- | 123 | (3.30) | 3.7 | (2.40) |
| 17 | (355) | >10.8 | 30 | <260 | | --- | ---- | 3.4 | (2.48) |
| 18 | | >10.5 | 31 | 290 | | | | 3.6 | (2.52) |
| 19 | | >10.0 | 31 | 325 | | | | 3.2 | (2.50) |
| 20 | | (9.85) | 28 | 380 | | | | | (2.38) |
| 21 | | >9.4 | 29 | 380 | | | | | (2.38) |
| 22 | | >9.0 | 29 | 370 | | | | | (2.42) |
| 23 | | (9.2) | 25 | 340 | | | | | (2.55) |

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 48

La Paz, Bolivia (16.5° S, 68.1° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.1 | 28 | 220 | | | | 2.8 | 3.12 |
| 01 | | 6.75 | 30 | 220 | | | | | 3.20 |
| 02 | | 6.4 | 31 | 225 | | | | | 3.20 |
| 03 | | 5.8 | 29 | 220 | | | | | 3.10 |
| 04 | | 5.0 | 29 | 240 | | | | | 3.15 |
| 05 | | 4.1 | 28 | 250 | | | | | 3.10 |
| 06 | | 3.7 | 29 | 255 | | | | 3.0 | 3.10 |
| 07 | | 4.95 | 30 | 270 | | <154 | 1.50 | 3.2 | 3.00 |
| 08 | | 8.3 | 30 | 240 | | 113 | 2.55 | 3.6 | 3.12 |
| 09 | --- | 10.2 | 31 | 225 | | 105 | 3.10 | 5.0 | 2.98 |
| 10 | --- | 10.6 | 28 | 215 | | 103 | (3.45) | 6.0 | 2.70 |
| 11 | --- | >10.4 | 27 | 210 | --- | --- | (3.70) | 7.3 | 2.68 |
| 12 | --- | 9.95 | 28 | 200 | --- | --- | (3.70) | 7.2 | 2.55 |
| 13 | --- | 9.85 | 30 | 200 | --- | --- | (3.75) | 7.2 | 2.45 |
| 14 | --- | 9.7 | 29 | 200 | | --- | (3.68) | 7.3 | 2.40 |
| 15 | --- | 9.35 | 30 | 200 | | --- | (3.50) | 7.0 | 2.40 |
| 16 | --- | 9.35 | 30 | 220 | | 109 | (3.20) | 6.0 | 2.40 |
| 17 | | 9.0 | 29 | 240 | | 109 | (2.70) | 5.6 | 2.50 |
| 18 | | 9.0 | 31 | 270 | | <131 | 1.90 | 4.6 | 2.55 |
| 19 | | 8.8 | 31 | 295 | | | | 2.6 | 2.52 |
| 20 | | 8.15 | 30 | 280 | | | | 2.5 | 2.55 |
| 21 | | 8.4 | 29 | 250 | | | | 2.6 | 2.70 |
| 22 | | 8.1 | 29 | 230 | | | | 3.1 | 2.98 |
| 23 | | 7.7 | 29 | 225 | | | | 3.1 | 3.08 |

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 49

Concepcion, Chile (36.6° S, 73.0° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.25 | 28 | 310 | | | | 1.8 | 2.68 |
| 01 | | 4.1 | 28 | 300 | | | | 2.4 | 2.70 |
| 02 | | 4.0 | 28 | 290 | | | | 2.7 | 2.80 |
| 03 | | 4.0 | 28 | 290 | | | | 3.0 | 2.80 |
| 04 | | 3.85 | 28 | 260 | | | | 2.6 | 2.95 |
| 05 | | 3.5 | 29 | 250 | | | | 2.7 | 2.90 |
| 06 | | 3.3 | 29 | 280 | | --- | ---- | 2.6 | 2.80 |
| 07 | | 5.4 | 28 | 250 | | (163) | (1.80) | | 3.20 |
| 08 | | 8.3 | 27 | 230 | | 119 | 2.40 | | 3.40 |
| 09 | --- | 9.5 | 27 | 230 | | 115 | 2.90 | 3.2 | 3.50 |
| 10 | --- | 9.45 | 28 | 220 | | 109 | 3.20 | 3.5 | 3.48 |
| 11 | 250 | 9.6 | 29 | 220 | | 109 | 3.30 | 3.5 | 3.40 |
| 12 | 250 | 9.75 | 28 | 220 | | 109 | 3.40 | | 3.35 |
| 13 | 260 | 9.9 | 30 | 215 | | 111 | 3.35 | | 3.25 |
| 14 | 270 | 10.1 | 30 | 230 | | 111 | 3.15 | | 3.30 |
| 15 | (250) | 9.4 | 29 | 230 | | 119 | 2.80 | 3.1 | 3.30 |
| 16 | --- | 9.6 | 28 | 230 | | 121 | 2.30 | | 3.40 |
| 17 | | 8.5 | 30 | 220 | | --- | ---- | 2.0 | 3.40 |
| 18 | | 7.0 | 31 | 210 | | | | 2.2 | 3.20 |
| 19 | | 6.6 | 31 | 230 | | | | 2.6 | 3.00 |
| 20 | | 6.4 | 30 | 240 | | | | | 3.00 |
| 21 | | 5.8 | 29 | 240 | | | | | 3.00 |
| 22 | | 5.0 | 29 | 270 | | | | | 2.80 |
| 23 | | 4.5 | 28 | 300 | | | | | 2.70 |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 50

Byrd Station (80.0° S, 120.0° W) July 1960

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (5.2) | 6 | <325 | | | | 3.3 | ---- |
| 01 | | (5.0) | 6 | <365 | | | | 3.9 | ---- |
| 02 | | (4.1) | 6 | <350 | | | | 4.0 | ---- |
| 03 | | (5.1) | 8 | <350 | | | | 3.9 | (2.78) |
| 04 | | (4.45) | 8 | <310 | | | | 3.6 | (2.90) |
| 05 | | (3.2) | 7 | (300) | | | | | (2.95) |
| 06 | | (2.75) | 4 | (270) | | | | 2.3 | ---- |
| 07 | | (2.4) | 1 | --- | | | | | ---- |
| 08 | | (2.3) | 4 | --- | | | | | ---- |
| 09 | | (2.05) | 4 | --- | | | | | ---- |
| 10 | | (2.2) | 7 | <290 | | | | | (3.10) |
| 11 | | (2.5) | 9 | 275 | | | | | (2.90) |
| 12 | | (2.75) | 10 | <300 | | | | | (3.00) |
| 13 | | >2.65 | 6 | <315 | | | | | (3.10) |
| 14 | | (2.3) | 4 | <390 | | | | 2.5 | ---- |
| 15 | | (2.6) | 8 | 385 | | | | 2.4 | (2.80) |
| 16 | | (2.7) | 5 | <410 | | | | 2.5 | (2.65) |
| 17 | | (3.8) | 7 | (340) | | | | 5.2 | (2.60) |
| 18 | | (4.3) | 5 | <370 | | --- | ---- | 4.2 | (2.55) |
| 19 | | (4.8) | 5 | <345 | | --- | ---- | 3.8 | ---- |
| 20 | | (4.9) | 8 | 310 | | | | 4.3 | (2.78) |
| 21 | | (4.95) | 2 | (290) | | | | 4.4 | ---- |
| 22 | | (5.5) | 4 | (320) | | | | 3.6 | ---- |
| 23 | | (4.8) | 5 | <310 | | | | | ---- |

Time: Local.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 51

Upsala, Sweden (59.8° N, 17.6° E) October 1959

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.2 | 30 | 315 | | 105 | 0.90 | 2.3 | 2.5 |
| 01 | | 4.0 | 30 | 310 | | 105 | 0.80 | 2.5 | 2.5 |
| 02 | | (3.8) | 27 | 305 | | 105 | 0.80 | 2.5 | 2.5 |
| 03 | | (3.6) | 29 | 290 | | 110 | 0.85 | 2.9 | 2.6 |
| 04 | | 3.5 | 29 | 290 | | 105 | 0.80 | 2.8 | 2.6 |
| 05 | | 3.4 | 30 | 280 | | 105 | 0.85 | 2.7 | 2.6 |
| 06 | --- | 4.2 | 31 | 260 | | 110 | 1.25 | 2.8 | 2.8 |
| 07 | --- | 5.8 | 31 | 250 | --- | 105 | 1.70 | | 3.0 |
| 08 | --- | 7.1 | 31 | 245 | --- | 110 | 2.30 | | 3.0 |
| 09 | --- | 8.9 | 31 | 240 | --- | <115 | 2.50 | | 3.0 |
| 10 | --- | 9.8 | 31 | 235 | --- | <115 | 2.70 | 3.0 | 3.0 |
| 11 | --- | 10.3 | 31 | 235 | --- | <115 | 2.90 | | 3.0 |
| 12 | --- | 10.6 | 31 | 240 | --- | <115 | 2.90 | | 3.0 |
| 13 | --- | 10.7 | 31 | 235 | --- | <110 | 2.80 | | 2.9 |
| 14 | --- | 10.6 | 31 | 240 | --- | <110 | 2.60 | | 3.0 |
| 15 | --- | 10.4 | 30 | 240 | | (110) | 2.35 | | 3.0 |
| 16 | --- | 9.7 | 31 | 235 | | 105 | 1.95 | | 3.0 |
| 17 | | 9.0 | 31 | 240 | | 105 | 1.35 | 1.7 | 3.0 |
| 18 | | 7.9 | 30 | 240 | | 105 | 1.00 | 2.4 | 3.0 |
| 19 | | 7.2 | 29 | 240 | | 105 | 1.00 | 1.4 | 3.0 |
| 20 | | 6.4 | 27 | 240 | | 105 | 1.00 | | 2.9 |
| 21 | | 5.2 | 30 | 250 | | 105 | 0.90 | | 2.7 |
| 22 | | 4.7 | 29 | 280 | | 105 | (0.95) | 2.3 | 2.6 |
| 23 | | 4.1 | 29 | 305 | | 105 | 0.85 | 2.7 | 2.5 |

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 16.0 Mc in 6 minutes, automatic operation.

Table 52

Upsala, Sweden (59.8° N, 17.6° E) September 1959

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.6 | 26 | 330 | | --- | ---- | 2.6 | 2.4 |
| 01 | | 4.3 | 26 | 315 | | --- | ---- | 2.2 | 2.4 |
| 02 | | (4.0) | 23 | 340 | | --- | ---- | 3.0 | 2.4 |
| 03 | | 3.8 | 24 | 325 | | --- | ---- | 2.7 | 2.5 |
| 04 | --- | 3.6 | 22 | 305 | | --- | 0.85 | 2.6 | 2.4 |
| 05 | --- | 4.0 | 28 | 295 | | 110 | 1.45 | 2.1 | 2.6 |
| 06 | --- | 4.8 | 29 | 270 | --- | 105 | 1.95 | 2.9 | 2.7 |
| 07 | --- | 5.4 | 29 | 250 | 4.0 | 105 | 2.40 | 3.0 | 2.8 |
| 08 | (450) | 6.2 | 29 | 245 | 4.5 | 105 | 2.70 | 3.4 | 2.8 |
| 09 | 355 | 6.5 | 29 | 240 | 4.6 | 105 | 3.00 | 3.9 | 2.7 |
| 10 | 450 | 6.9 | 29 | 235 | 4.9 | 105 | 3.15 | | 2.7 |
| 11 | 390 | 7.1 | 29 | 235 | 5.1 | (105) | 3.30 | 3.9 | 2.7 |
| 12 | (435) | 7.8 | 30 | 240 | 5.2 | (105) | 3.30 | | 2.7 |
| 13 | (410) | 7.6 | 29 | 235 | 5.2 | (105) | 3.30 | | 2.7 |
| 14 | (380) | 7.8 | 30 | 240 | 5.0 | (105) | 3.15 | | 2.7 |
| 15 | --- | 7.8 | 30 | 240 | (4.8) | (105) | 3.00 | | 2.7 |
| 16 | --- | 7.9 | 30 | 245 | 4.9 | 105 | 2.65 | 2.6 | 2.8 |
| 17 | --- | 7.9 | 30 | 250 | --- | 105 | 2.25 | 2.3 | 2.8 |
| 18 | --- | 8.0 | 30 | 250 | | 105 | 1.60 | | 2.8 |
| 19 | | 7.8 | 30 | 250 | | 110 | 1.40 | 1.4 | 2.7 |
| 20 | | 6.9 | 30 | 250 | | --- | 0.70 | 1.4 | 2.7 |
| 21 | | 5.8 | 28 | 260 | | --- | ---- | 1.7 | 2.7 |
| 22 | | 5.0 | 26 | 280 | | | | 1.6 | 2.6 |
| 23 | | 4.7 | 23 | 310 | | | | 1.3 | 2.5 |

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 53

Churchill, Canada (58.8° N, 94.2° W) August 1959

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.1 | 28 | 300 | | | | 5.0 | --- |
| 01 | | 4.8 | 25 | 300 | | --- | --- | 5.0 | --- |
| 02 | | 4.7 | 23 | 300 | | --- | --- | 4.8 | |
| 03 | | 4.5 | 20 | 300 | | --- | (1.8) | 4.5 | |
| 04 | | 4.6 | 21 | 340 | --- | --- | 2.1 | 4.7 | |
| 05 | --- | 4.7 | 25 | 320 | (3.4) | --- | 2.3 | 4.2 | |
| 06 | (550) | 4.8 | 25 | 280 | 3.7 | (120) | 2.7 | 4.5 | --- |
| 07 | (520) | 5.1 | 22 | 260 | 4.2 | 110 | 3.1 | 4.3 | --- |
| 08 | 480 | 5.2 | 22 | 250 | 4.5 | 110 | 3.5 | 4.5 | --- |
| 09 | 500 | 5.7 | 26 | 250 | 4.8 | 110 | 3.6 | 3.8 | --- |
| 10 | 540 | 5.9 | 25 | 230 | 5.0 | 105 | 3.8 | | (2.6) |
| 11 | 500 | 5.8 | 29 | 240 | 5.0 | 105 | 3.8 | | 2.4 |
| 12 | 510 | 6.0 | 30 | 230 | 5.0 | 105 | 3.8 | | 2.5 |
| 13 | 500 | 6.3 | 28 | 220 | 5.1 | 105 | 3.8 | | 2.5 |
| 14 | 480 | 6.6 | 28 | 230 | 5.1 | 105 | 3.7 | | 2.4 |
| 15 | 460 | 6.8 | 30 | 230 | 5.0 | 110 | 3.5 | | 2.5 |
| 16 | 440 | 6.7 | 30 | 240 | 4.8 | 110 | 3.4 | | 2.6 |
| 17 | 420 | 6.7 | 29 | 250 | 4.5 | 110 | 3.1 | | (2.6) |
| 18 | 400 | 6.2 | 30 | 260 | 4.2 | 110 | 3.0 | | (2.7) |
| 19 | --- | 6.0 | 31 | 300 | (3.7) | 120 | 2.8 | 3.5 | (2.7) |
| 20 | | 5.7 | 30 | 310 | | 130 | 2.6 | 3.5 | --- |
| 21 | | 5.6 | 28 | 310 | | --- | 2.0 | 6.0 | |
| 22 | | 5.0 | 27 | 340 | | --- | (2.0) | 6.0 | --- |
| 23 | | 5.0 | 28 | 310 | | --- | --- | 5.0 | |

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 54

De Bilt, Holland (52.1° N, 5.2° E) August 1959

| Time | h'F2 | foF2 | Count | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 6.0 | 30 | 305 | | | | 2.4 | 2.50 |
| 01 | | 5.7 | 31 | 320 | | | | 3.0 | 2.45 |
| 02 | | 5.4 | 31 | 310 | | | | 3.0 | 2.50 |
| 03 | | 5.1 | 31 | 315 | | | | 2.5 | 2.50 |
| 04 | | 5.0 | 31 | 300 | | --- | --- | 3.1 | 2.65 |
| 05 | (385) | 5.6 | 31 | 270 | (3.6) | 100 | 2.0 | 3.5 | 2.95 |
| 06 | 425 | 6.3 | 31 | 250 | 4.3 | 105 | 2.6 | 3.9 | 2.90 |
| 07 | 405 | 6.8 | 30 | 235 | 4.8 | 100 | 3.0 | 4.2 | 2.85 |
| 08 | 380 | 7.2 | 30 | 225 | 5.0 | 100 | 3.3 | 4.0 | 2.80 |
| 09 | 400 | 7.2 | 31 | 225 | 5.2 | 100 | 3.4 | 4.8 | 2.75 |
| 10 | 380 | 7.9 | 31 | 220 | 5.4 | 100 | 3.6 | 4.8 | 2.85 |
| 11 | 400 | 7.8 | 30 | 215 | 5.5 | 100 | 3.6 | 4.6 | 2.80 |
| 12 | 400 | 7.6 | 31 | 210 | 5.6 | 100 | 3.7 | 4.6 | 2.70 |
| 13 | 410 | 7.7 | 30 | 220 | 5.6 | 100 | 3.7 | 4.4 | 2.70 |
| 14 | 400 | 7.6 | 30 | 225 | 5.5 | 100 | 3.6 | 4.3 | 2.70 |
| 15 | 400 | 7.8 | 31 | 230 | 5.2 | 100 | 3.5 | 4.1 | 2.75 |
| 16 | 350 | 7.6 | 31 | 240 | (4.6) | 100 | 3.3 | 3.9 | 2.80 |
| 17 | (315) | 7.6 | 30 | 250 | (4.6) | 105 | 3.0 | 3.6 | 2.85 |
| 18 | --- | 8.0 | 31 | 270 | --- | 115 | 2.4 | 3.9 | 2.90 |
| 19 | | 8.0 | 29 | 270 | | (150) | --- | 3.9 | 2.95 |
| 20 | | 7.9 | 30 | 270 | | | | 4.2 | 2.80 |
| 21 | | 7.5 | 31 | 275 | | | | 3.1 | 2.75 |
| 22 | | 6.9 | 31 | 275 | | | | 2.5 | 2.65 |
| 23 | | 6.4 | 31 | 300 | | | | 2.5 | 2.55 |

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 55

Wakkanai, Japan (45.4° N, 141.7° E) August 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.1 | 28 | 310 | | | | 3.5 | 2.55 |
| 01 | | 6.8 | 27 | 305 | | | | 3.1 | 2.55 |
| 02 | | 6.7 | 28 | 300 | | | | 3.4 | 2.60 |
| 03 | | 6.4 | 28 | 300 | | | | 3.1 | 2.60 |
| 04 | | 6.3 | 30 | 310 | | | 1.30 | 3.0 | 2.55 |
| 05 | 420 | 7.0 | 31 | 280 | 3.5 | | 2.00 | 3.2 | 2.65 |
| 06 | 410 | 7.9 | 30 | 260 | 4.2 | | 2.65 | 3.5 | 2.80 |
| 07 | 400 | 8.0 | 29 | 250 | 4.6 | | 3.10 | 5.3 | 2.85 |
| 08 | 380 | 8.0 | 26 | 245 | 5.0 | | 3.45 | 6.0 | 2.85 |
| 09 | 415 | 8.3 | 25 | 245 | 5.3 | | 3.60 | 6.5 | 2.70 |
| 10 | 410 | 8.3 | 25 | 235 | 5.5 | | 3.70 | 6.2 | 2.60 |
| 11 | 450 | 8.1 | 27 | 250 | 5.5 | | 3.70 | 5.9 | 2.60 |
| 12 | 375 | 8.4 | 27 | 250 | 5.6 | | 3.70 | 5.4 | 2.65 |
| 13 | 375 | 8.4 | 27 | 250 | 5.6 | | 3.70 | 5.4 | 2.70 |
| 14 | 390 | 8.2 | 28 | 250 | 5.5 | | 3.75 | 4.9 | 2.70 |
| 15 | 350 | 8.3 | 28 | 250 | 5.3 | | 3.55 | 5.0 | 2.75 |
| 16 | 385 | 8.1 | 28 | 250 | (5.0) | | 3.30 | 5.3 | 2.75 |
| 17 | 375 | 8.2 | 28 | 260 | | | 2.75 | 5.8 | 2.75 |
| 18 | | 8.3 | 29 | 270 | | | 2.05 | 5.3 | 2.80 |
| 19 | | 8.0 | 26 | 275 | | | | 4.7 | 2.70 |
| 20 | | (8.0) | 26 | 275 | | | | 5.0 | (2.70) |
| 21 | | 7.8 | 26 | 280 | | | | 5.3 | 2.60 |
| 22 | | 7.6 | 27 | 280 | | | | 4.5 | 2.55 |
| 23 | | 7.3 | 27 | 300 | | | | 3.5 | 2.55 |

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 56

Akita, Japan (39.7° N, 140.1° E) August 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.8 | 28 | 320 | | | | 4.6 | 2.55 |
| 01 | | 7.6 | 29 | 310 | | | | 4.0 | 2.60 |
| 02 | | 7.2 | 30 | 300 | | | | 2.9 | 2.60 |
| 03 | | 7.0 | 30 | 300 | | | | 3.1 | 2.60 |
| 04 | | 6.7 | 31 | 305 | | | | 2.6 | 2.55 |
| 05 | 450 | 7.1 | 31 | 290 | 3.5 | | | 2.0 | 2.60 |
| 06 | 325 | 8.8 | 31 | 255 | 4.4 | | 2.50 | 4.0 | 2.90 |
| 07 | 290 | 9.1 | 29 | 250 | 4.8 | | 3.10 | 5.1 | 2.90 |
| 08 | 310 | 9.3 | 29 | 240 | 5.3 | | 3.50 | 6.6 | 2.80 |
| 09 | 340 | 9.0 | 28 | 230 | (5.4) | | 3.80 | 7.8 | 2.75 |
| 10 | 350 | 9.3 | 29 | 230 | (5.8) | | 3.90 | 8.2 | 2.70 |
| 11 | 370 | 9.3 | 29 | 230 | 6.0 | | 3.95 | 7.0 | 2.65 |
| 12 | 375 | 9.6 | 30 | 245 | 6.0 | | 4.00 | 6.6 | 2.70 |
| 13 | 370 | 9.6 | 30 | 240 | 6.0 | | 3.95 | 6.2 | 2.70 |
| 14 | 360 | 9.4 | 30 | 240 | 5.8 | | 3.95 | 5.9 | 2.70 |
| 15 | 350 | 9.4 | 30 | 245 | (5.4) | | 3.70 | 6.3 | 2.75 |
| 16 | 340 | 9.2 | 30 | 245 | 5.2 | | 3.40 | 4.7 | 2.75 |
| 17 | 305 | 9.0 | 30 | 255 | (4.0) | | 2.90 | 5.9 | 2.80 |
| 18 | (300) | 9.0 | 31 | 270 | | | 2.10 | 5.8 | 2.85 |
| 19 | | 8.6 | 28 | 260 | | | | 4.5 | 2.80 |
| 20 | | 8.3 | 27 | 285 | | | | 5.6 | 2.70 |
| 21 | | 8.1 | 27 | 290 | | | | 4.2 | 2.60 |
| 22 | | 8.0 | 27 | 300 | | | | 3.8 | 2.60 |
| 23 | | 7.8 | 27 | 310 | | | | 4.4 | 2.55 |

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 57

Tokyo, Japan (35.7° N, 139.5° E) August 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | (8.1) | 30 | 320 | | | | 3.3 | (2.60) |
| 01 | | 8.0 | 29 | 305 | | | | 3.0 | 2.65 |
| 02 | | 7.6 | 30 | 305 | | | | | 2.65 |
| 03 | | 7.1 | 31 | 305 | | | | | 2.65 |
| 04 | | 6.9 | 31 | 300 | | | | | 2.55 |
| 05 | 400 | 7.2 | 31 | 300 | | | | | 2.70 |
| 06 | 350 | 9.0 | 31 | 250 | (4.2) | | (2.55) | 2.9 | 2.90 |
| 07 | 320 | 9.6 | 31 | 250 | (5.0) | | (3.05) | 4.8 | 2.95 |
| 08 | 320 | 9.6 | 30 | 250 | (5.0) | | (3.50) | 4.9 | 2.90 |
| 09 | 320 | 9.5 | 29 | 225 | | | (3.80) | 6.7 | 2.80 |
| 10 | 350 | 9.6 | 28 | 245 | (5.7) | | (4.00) | 6.8 | 2.70 |
| 11 | 355 | 10.1 | 28 | 250 | (6.0) | | (4.05) | 6.2 | 2.65 |
| 12 | 350 | 10.4 | 29 | 245 | (5.9) | | (4.05) | 5.0 | 2.65 |
| 13 | 355 | 10.5 | 30 | 250 | (6.0) | | (4.10) | 5.2 | 2.70 |
| 14 | 350 | 10.6 | 31 | 245 | (5.6) | | (3.95) | 4.8 | 2.70 |
| 15 | 350 | 10.0 | 31 | 245 | (5.4) | | (3.85) | 4.9 | 2.70 |
| 16 | 325 | 9.9 | 31 | 250 | | | (3.50) | 4.7 | 2.75 |
| 17 | 305 | 9.8 | 31 | 260 | | | (2.85) | 5.0 | 2.80 |
| 18 | 310 | 9.8 | 30 | 260 | | | | 4.5 | 2.85 |
| 19 | | (9.3) | 29 | 260 | | | | 3.9 | (2.80) |
| 20 | | 8.4 | 29 | 275 | | | | 4.1 | 2.65 |
| 21 | | (8.3) | 27 | 305 | | | | 5.5 | 2.55 |
| 22 | | 8.4 | 27 | 310 | | | | 4.0 | 2.60 |
| 23 | | 8.3 | 29 | 320 | | | | 3.5 | 2.55 |

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 58

Yamagawa, Japan (31.2° N, 130.6° E) August 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 8.9 | 26 | 320 | | | | 4.2 | 2.50 |
| 01 | | 8.9 | 27 | 300 | | | | 3.4 | 2.60 |
| 02 | | 8.3 | 27 | 300 | | | | 3.1 | 2.60 |
| 03 | | 7.6 | 28 | 300 | | | | 3.0 | 2.55 |
| 04 | | 7.3 | 28 | 295 | | | | 2.9 | 2.60 |
| 05 | | 6.8 | 26 | 300 | | | | 2.8 | 2.60 |
| 06 | | 7.7 | 29 | 275 | | | 1.90 | 2.6 | 2.80 |
| 07 | 310 | 9.3 | 29 | 250 | | | 2.80 | 3.5 | 2.95 |
| 08 | 400 | 9.8 | 29 | 250 | | | 3.40 | 5.6 | 2.95 |
| 09 | 350 | 9.4 | 30 | 240 | 5.7 | | 3.70 | 5.5 | 2.80 |
| 10 | 350 | 9.8 | 31 | 250 | 6.0 | | 4.00 | 6.7 | 2.60 |
| 11 | 375 | 10.5 | 30 | 250 | 6.2 | | 4.10 | 6.0 | 2.60 |
| 12 | 390 | 11.4 | 30 | 240 | 6.4 | | 4.10 | 6.0 | 2.60 |
| 13 | 380 | 12.0 | 30 | 250 | 6.2 | | 4.15 | 6.4 | 2.55 |
| 14 | 370 | 11.8 | 30 | 250 | 6.2 | | 4.10 | 5.5 | 2.60 |
| 15 | 355 | 11.6 | 30 | 250 | 6.2 | | 4.00 | 5.7 | 2.60 |
| 16 | 350 | 11.4 | 30 | 250 | 5.7 | | 3.65 | 4.9 | 2.65 |
| 17 | 325 | 11.2 | 30 | 250 | | | 3.25 | 4.2 | 2.70 |
| 18 | 325 | 11.2 | 29 | 280 | | | 2.60 | 4.0 | 2.75 |
| 19 | | 10.8 | 29 | 280 | | | | 3.2 | 2.75 |
| 20 | | 9.2 | 28 | 270 | | | | 5.0 | 2.65 |
| 21 | | 8.7 | 26 | 295 | | | | 4.0 | 2.45 |
| 22 | | 8.8 | 27 | 320 | | | | 3.6 | 2.45 |
| 23 | | 8.8 | 25 | 330 | | | | 3.8 | 2.45 |

Time: 135.0°E.
Sweep: 1.0 Mc to 20.3 Mc in 30 seconds.

Table 59

Inverness, Scotland (57.4° N, 4.2° W) July 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 6.6 | 28 | 300 | | | | 1.8 | 2.45 |
| 01 | | 6.2 | 28 | 300 | | | | 1.5 | 2.45 |
| 02 | | 5.9 | 28 | 315 | | <135 | ---- | 2.7 | 2.40 |
| 03 | | 5.7 | 26 | 315 | | (105) | 1.30 | 1.8 | 2.50 |
| 04 | (450) | 5.6 | 27 | 300 | (3.5) | 105 | 1.80 | 1.8 | 2.50 |
| 05 | (495) | 5.6 | 27 | 260 | 3.9 | 105 | 2.30 | | 2.60 |
| 06 | 520 | 5.7 | 27 | 250 | 4.2 | 105 | 2.70 | | 2.60 |
| 07 | 525 | 6.2 | 26 | 240 | 4.6 | 110 | 3.00 | 3.0 | 2.50 |
| 08 | 505 | 6.5 | 25 | 235 | 4.9 | 105 | 3.25 | 3.4 | 2.55 |
| 09 | 475 | 6.8 | 27 | 235 | 5.0 | 105 | 3.45 | 3.9 | 2.65 |
| 10 | 490 | 6.8 | 27 | 235 | 5.2 | 105 | 3.60 | 4.0 | 2.60 |
| 11 | 440 | 7.0 | 25 | 220 | 5.3 | 100 | 3.70 | 4.1 | 2.60 |
| 12 | 480 | 7.0 | 27 | 220 | 5.4 | 100 | 3.75 | 4.0 | 2.55 |
| 13 | 450 | 7.0 | 27 | 220 | 5.4 | 105 | 3.75 | 4.0 | 2.50 |
| 14 | 465 | 7.0 | 26 | 225 | 5.4 | 105 | 3.70 | | 2.55 |
| 15 | 460 | 7.0 | 27 | 225 | 5.2 | 105 | 3.65 | 3.9 | 2.60 |
| 16 | 460 | 7.0 | 28 | 230 | 5.1 | 105 | 3.50 | | 2.60 |
| 17 | (450) | 7.3 | 29 | 235 | (5.0) | 110 | 3.30 | | 2.65 |
| 18 | | 6.9 | 28 | 250 | | 110 | 3.00 | 3.8 | 2.70 |
| 19 | | 7.0 | 26 | 270 | | 115 | 2.55 | 3.2 | 2.70 |
| 20 | | 7.0 | 28 | 270 | | <145 | 2.10 | 2.4 | 2.75 |
| 21 | | 7.0 | 27 | 285 | | | 1.65 | <1.8 | 2.70 |
| 22 | | 7.0 | 26 | 290 | | | ---- | <1.6 | 2.55 |
| 23 | | 7.0 | 26 | 300 | | | | <1.6 | 2.50 |

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 60

Concepcion, Chile (36.6° S, 73.0° W) July 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 5.0 | 30 | 320 | | | | | 2.62 |
| 01 | | 4.85 | 30 | 295 | | | | | 2.68 |
| 02 | | 4.8 | 30 | 295 | | | | | 2.70 |
| 03 | | 4.7 | 30 | 290 | | | | | 2.78 |
| 04 | | 4.5 | 30 | <270 | | --- | ---- | | 2.78 |
| 05 | | 3.95 | 28 | <265 | | --- | ---- | | 2.68 |
| 06 | | 4.0 | 29 | <285 | | --- | ---- | | 2.80 |
| 07 | | 6.6 | 29 | 250 | | <165 | 1.85 | | 3.10 |
| 08 | | 10.3 | 29 | 230 | | 115 | (2.40) | | 3.40 |
| 09 | | 11.0 | 29 | 225 | | 109 | 3.00 | | 3.40 |
| 10 | (260) | 11.0 | 29 | 220 | | 109 | 3.30 | 3.6 | 3.38 |
| 11 | --- | 10.65 | 28 | 220 | | 108 | 3.50 | | 3.30 |
| 12 | --- | 10.8 | 29 | 210 | | 109 | 3.50 | >3.7 | 3.10 |
| 13 | --- | 11.8 | 29 | 205 | | 109 | 3.48 | | 3.15 |
| 14 | --- | 12.1 | 29 | 220 | | 111 | 3.30 | 3.4 | 3.15 |
| 15 | | 11.2 | 28 | 230 | | 111 | 3.00 | | 3.20 |
| 16 | | 10.5 | 30 | 230 | | 116 | 2.60 | | 3.20 |
| 17 | | 9.6 | 29 | 220 | | --- | ---- | 2.2 | 3.20 |
| 18 | | 8.85 | 30 | 220 | | | | 2.8 | 3.10 |
| 19 | | 8.75 | 30 | 225 | | | | 2.3 | 3.15 |
| 20 | | 7.6 | 29 | 220 | | | | | 3.08 |
| 21 | | 6.8 | 29 | 230 | | | | 2.0 | 2.90 |
| 22 | | 6.0 | 30 | 265 | | | | | 2.75 |
| 23 | | 5.65 | 30 | 290 | | | | | 2.65 |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 61

Inverness, Scotland (57.4° N, 4.2° W) June 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.3 | 29 | 310 | | | | <1.6 | 2.45 |
| 01 | | 6.8 | 29 | 310 | | | | 1.2 | 2.45 |
| 02 | | 6.9 | 29 | 315 | | (115) | ---- | 2.3 | 2.45 |
| 03 | | 6.7 | 29 | 315 | | 115 | 1.50 | 1.6 | 2.50 |
| 04 | | 6.7 | 29 | 290 | | 105 | 1.90 | 2.1 | 2.50 |
| 05 | (380) | 6.8 | 29 | 260 | --- | 105 | 2.40 | 2.6 | 2.60 |
| 06 | 465 | 6.9 | 29 | 250 | 4.4 | 105 | 2.80 | 3.0 | 2.60 |
| 07 | 470 | 6.8 | 29 | 240 | 4.7 | 105 | 3.05 | 3.5 | 2.50 |
| 08 | 430 | >7.0 | 27 | 235 | 5.1 | 105 | 3.35 | 3.8 | 2.60 |
| 09 | 425 | 7.4 | 26 | 220 | 5.1 | 105 | 3.60 | 3.9 | 2.55 |
| 10 | 455 | 7.4 | 25 | 215 | 5.3 | 100 | 3.60 | 4.1 | 2.60 |
| 11 | 470 | 7.5 | 26 | 220 | 5.4 | 100 | 3.70 | 4.1 | 2.55 |
| 12 | 435 | 7.5 | 25 | 220 | 5.4 | 100 | 3.80 | 4.1 | 2.50 |
| 13 | 470 | 7.3 | 27 | 225 | 5.5 | 100 | 3.80 | 3.9 | 2.50 |
| 14 | 480 | 7.3 | 26 | 220 | 5.5 | 100 | 3.75 | 4.0 | 2.50 |
| 15 | 480 | 7.3 | 26 | 220 | 5.4 | 105 | 3.65 | 3.8 | 2.50 |
| 16 | 445 | 7.4 | 28 | 230 | 5.3 | 105 | 3.50 | | 2.60 |
| 17 | 475 | 7.4 | 28 | 240 | 4.8 | 105 | 3.30 | 3.8 | 2.60 |
| 18 | | 7.3 | 29 | 245 | | 110 | 3.00 | 3.8 | 2.70 |
| 19 | | 7.4 | 28 | 255 | | 115 | 2.70 | 3.8 | 2.70 |
| 20 | | 7.6 | 29 | 260 | | 125 | 2.25 | 3.0 | 2.75 |
| 21 | | 7.6 | 29 | 275 | | (120) | 1.80 | 2.8 | 2.65 |
| 22 | | 7.2 | 28 | 290 | | | ---- | 2.5 | 2.50 |
| 23 | | 7.2 | 29 | 295 | | | | <1.7 | 2.50 |

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 62

De Bilt, Holland (52.1° N, 5.2° E) May 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 7.0 | 31 | 305 | | | | 2.2 | 2.45 |
| 01 | | 6.5 | 31 | 305 | | | | 2.1 | 2.45 |
| 02 | | 6.1 | 31 | 305 | | | | 2.5 | 2.50 |
| 03 | | 5.9 | 31 | 300 | | | | 3.1 | 2.55 |
| 04 | --- | 6.1 | 31 | 295 | --- | --- | 1.8 | 2.9 | 2.65 |
| 05 | --- | 6.6 | 31 | 260 | --- | 105 | 2.3 | 3.4 | 2.80 |
| 06 | 480 | 6.9 | 30 | 240 | 4.5 | 100 | 2.9 | 3.8 | 2.80 |
| 07 | 515 | 7.7 | 30 | 225 | 4.8 | 100 | 3.2 | 3.5 | 2.85 |
| 08 | 470 | 7.7 | 31 | 215 | 5.0 | 100 | 3.5 | 4.1 | 2.70 |
| 09 | 395 | 8.4 | 31 | 215 | 5.4 | 100 | 3.7 | 4.0 | 2.80 |
| 10 | 395 | 8.4 | 31 | 210 | 5.4 | 100 | 3.8 | 4.1 | 2.65 |
| 11 | 415 | 8.5 | 31 | 210 | 5.6 | 100 | 3.9 | 4.6 | 2.70 |
| 12 | 410 | 8.4 | 30 | 220 | 5.7 | 100 | 3.9 | 4.0 | 2.65 |
| 13 | 405 | 8.5 | 30 | 220 | 5.7 | 100 | 3.8 | 4.2 | 2.65 |
| 14 | 380 | 8.5 | 31 | 220 | 5.5 | 100 | 3.7 | 4.0 | 2.65 |
| 15 | 400 | 8.4 | 31 | 225 | 5.4 | 100 | 3.6 | 3.7 | 2.70 |
| 16 | --- | 8.3 | 31 | 230 | --- | 100 | 3.3 | 3.8 | 2.75 |
| 17 | --- | >8.3 | 31 | 240 | --- | 100 | 3.0 | 3.7 | 2.75 |
| 18 | --- | 8.5 | 30 | 260 | --- | 105 | 2.5 | 3.1 | 2.80 |
| 19 | --- | >8.4 | 31 | 270 | --- | 130 | 2.0 | 2.7 | 2.90 |
| 20 | | 8.4 | 31 | 270 | | --- | --- | 2.5 | 2.70 |
| 21 | | 8.0 | 31 | 270 | | | | 2.2 | 2.60 |
| 22 | | 7.4 | 31 | 290 | | | | | 2.55 |
| 23 | | 7.4 | 31 | 300 | | | | 2.0 | 2.55 |

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 63

De Bilt, Holland (52.1° N, 5.2° E) April 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 6.6 | 29 | 315 | | | | 1.8 | 2.45 |
| 01 | | 6.2 | 29 | 315 | | | | 2.1 | 2.50 |
| 02 | | 5.9 | 29 | 315 | | | | 2.2 | 2.45 |
| 03 | | 5.6 | 29 | 315 | | | | 2.5 | 2.50 |
| 04 | | 5.2 | 29 | 300 | | --- | --- | 2.6 | 2.60 |
| 05 | --- | 5.8 | 29 | 280 | --- | 150 | 1.9 | 3.6 | 2.75 |
| 06 | --- | 6.6 | 29 | 250 | --- | 100 | 2.5 | 3.1 | 2.90 |
| 07 | 450 | 7.2 | 29 | 235 | 4.7 | 100 | 2.9 | 3.9 | 2.80 |
| 08 | 400 | 8.0 | 29 | 225 | 4.9 | 100 | 3.3 | 3.9 | 2.80 |
| 09 | 400 | 8.5 | 30 | 225 | 5.3 | 100 | 3.6 | 3.9 | 2.70 |
| 10 | 385 | 9.2 | 30 | 220 | 5.7 | 100 | 3.7 | 4.0 | 2.70 |
| 11 | 400 | 9.8 | 29 | 220 | 5.8 | 100 | 3.8 | 3.9 | 2.70 |
| 12 | 400 | 10.0 | 29 | 220 | 5.6 | 100 | 3.8 | 4.1 | 2.65 |
| 13 | 380 | 9.8 | 29 | 225 | 6.1 | 100 | 3.8 | 3.9 | 2.70 |
| 14 | 360 | 9.6 | 29 | 225 | 5.4 | 100 | 3.6 | 3.7 | 2.70 |
| 15 | 400 | 9.6 | 29 | 230 | 5.3 | 100 | 3.4 | | 2.70 |
| 16 | 330 | 9.4 | 30 | 235 | 5.1 | 100 | 3.1 | | 2.75 |
| 17 | --- | 9.1 | 30 | 250 | --- | 100 | 2.7 | | 2.85 |
| 18 | --- | 9.0 | 30 | 250 | --- | 125 | 2.1 | | 2.90 |
| 19 | | >8.6 | 30 | 250 | | --- | 1.8 | | 2.85 |
| 20 | | 8.0 | 30 | 250 | | | | | 2.75 |
| 21 | | 7.6 | 30 | 270 | | | | | 2.60 |
| 22 | | 7.1 | 30 | 280 | | | | | 2.55 |
| 23 | | 6.8 | 30 | 310 | | | | | 2.50 |

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 64

Delhi, India (28.6° N, 77.2° E) March 1959

| Time | * | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | (380) | >8.9 | 29 | | | | | | (2.85) |
| 01 | --- | >8.2 | 25 | | | | | | ---- |
| 02 | --- | (7.1) | 5 | | | | | | ---- |
| 03 | --- | >6.9 | 6 | | | | | | ---- |
| 04 | --- | >6.0 | 27 | | | | | | ---- |
| 05 | 340 | >5.8 | 31 | | | | | | (2.80) |
| 06 | (300) | >7.2 | 29 | | | | | | (3.15) |
| 07 | (260) | >9.8 | 22 | | | | | | ---- |
| 08 | 280 | >12.1 | 28 | | | 100 | 3.0 | | 3.25 |
| 09 | 300 | 13.2 | 28 | | | 100 | 3.6 | | 3.10 |
| 10 | 320 | (14.0) | 28 | | | 100 | 3.9 | | 3.00 |
| 11 | 360 | (14.6) | 26 | | | 100 | 3.8 | | 2.85 |
| 12 | (360) | >14.6 | 23 | | | 100 | 3.8 | | (2.80) |
| 13 | (340) | (15.2) | 23 | | | 100 | 3.9 | | (2.85) |
| 14 | --- | >15.2 | 20 | | | 100 | 3.8 | | ---- |
| 15 | --- | >15.0 | 23 | | | 100 | 3.6 | | ---- |
| 16 | (340) | >14.7 | 26 | | | --- | --- | | (2.85) |
| 17 | --- | >14.4 | 27 | | | --- | --- | | ---- |
| 18 | --- | >14.2 | 29 | | | | | | ---- |
| 19 | --- | >13.7 | 29 | | | | | | ---- |
| 20 | --- | >13.3 | 24 | | | | | | ---- |
| 21 | --- | >11.7 | 24 | | | | | | ---- |
| 22 | --- | (11.0) | 27 | | | | | | ---- |
| 23 | --- | >9.5 | 28 | | | | | | ---- |

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.

Table 65

Ahmedabad, India (23.0° N, 72.6° E) March 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 14.6 | 27 | 260 | | | | | 2.75 |
| 01 | | 13.0 | 27 | 260 | | | | | 2.75 |
| 02 | | 11.7 | 27 | 260 | | | | | 2.75 |
| 03 | | 10.0 | 27 | 250 | | | | 2.2 | 3.00 |
| 04 | | 8.1 | 28 | 250 | | | | 1.9 | 2.90 |
| 05 | | 6.9 | 30 | 260 | | | | 1.6 | 2.80 |
| 06 | | 7.3 | 29 | 250 | | | | | 2.80 |
| 07 | | 10.7 | 29 | 250 | | 115 | 2.2 | | 3.00 |
| 08 | | 12.6 | 29 | 250 | | 110 | 3.0 | | 3.00 |
| 09 | 250 | 13.7 | 28 | 250 | --- | 110 | 3.6 | | 2.80 |
| 10 | 300 | 14.6 | 25 | 230 | --- | 110 | 3.9 | | 2.65 |
| 11 | 350 | 15.3 | 28 | 225 | (5.0) | 110 | 4.0 | | 2.50 |
| 12 | 400 | 16.1 | 26 | 210 | (5.0) | 110 | --- | | 2.40 |
| 13 | 400 | 16.7 | 17 | --- | --- | 110 | --- | | 2.40 |
| 14 | 400 | 16.8 | 17 | 230 | --- | 110 | 4.0 | | 2.40 |
| 15 | 365 | 16.5 | 19 | 240 | (4.9) | 110 | 3.9 | | 2.45 |
| 16 | 350 | 16.4 | 18 | 250 | --- | 110 | 3.5 | | 2.50 |
| 17 | 340 | 16.4 | 19 | 250 | --- | 115 | 2.9 | | 2.55 |
| 18 | 265 | 16.4 | 28 | 265 | | 120 | 2.0 | | 2.55 |
| 19 | | 16.6 | 27 | 300 | | | | 1.7 | 2.50 |
| 20 | | (17.2) | 15 | 300 | | | | | 2.45 |
| 21 | | >16.0 | 26 | 250 | | | | | 2.65 |
| 22 | | >16.0 | 23 | 250 | | | | | 2.75 |
| 23 | | 15.2 | 24 | 250 | | | | 2.0 | 2.75 |

Time: 75.0°E.
Sweep: 0.6 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 66

Bombay, India (19.0° N, 72.8° E) March 1959

| Time | * | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | --- | >11.0 | 11 | | | | | | --- |
| 01 | (340) | >9.2 | 13 | | | | | | --- |
| 02 | (320) | >8.4 | 20 | | | | | | (3.0) |
| 03 | 320 | >7.5 | 26 | | | | | | 3.1 |
| 04 | 280 | 6.4 | 27 | | | | | | 3.25 |
| 05 | 280 | 5.9 | 27 | | | | | | 3.3 |
| 06 | (280) | (6.8) | 27 | | | | | | (3.3) |
| 07 | (280) | >8.9 | 27 | | | --- | --- | | (3.25) |
| 08 | --- | --- | 0 | | | --- | --- | | |
| 09 | --- | >13.0 | 28 | | | 100 | 4.4 | | ---- |
| 10 | --- | >13.5 | 29 | | | 100 | 3.9 | | ---- |
| 11 | --- | >14.3 | 28 | | | --- | --- | | ---- |
| 12 | --- | >14.6 | 26 | | | --- | --- | | |
| 13 | --- | >12.8 | 6 | | | --- | --- | | |
| 14 | --- | >14.2 | 26 | | | --- | --- | | ---- |
| 15 | --- | >14.5 | 28 | | | --- | --- | | ---- |
| 16 | --- | >14.4 | 28 | | | --- | --- | | ---- |
| 17 | --- | >14.1 | 26 | | | --- | --- | | |
| 18 | --- | >14.4 | 28 | | | | | | ---- |
| 19 | --- | >13.9 | 28 | | | | | | ---- |
| 20 | --- | (13.4) | 3 | | | | | | |
| 21 | --- | >12.6 | 8 | | | | | | |
| 22 | --- | >12.6 | 5 | | | | | | |
| 23 | --- | >11.5 | 7 | | | | | | |

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
* Height at 0.83 foF2.

Table 67

Tiruchy, India (10.8° N, 78.7° E) March 1959

| Time | * | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | --- | (11.3) | 3 | | | | | | |
| 01 | --- | >11.5 | 3 | | | | | | |
| 02 | --- | >11.1 | 2 | | | | | | |
| 03 | --- | (10.2) | 5 | | | | | | |
| 04 | --- | (8.0) | 7 | | | | | | ---- |
| 05 | --- | 7.0 | 11 | | | | | | ---- |
| 06 | (280) | 8.2 | 17 | | | | | | (3.25) |
| 07 | (320) | (11.2) | 30 | | | | | >7.0 | (3.05) |
| 08 | 360 | 13.1 | 30 | | | | | >10.0 | 2.65 |
| 09 | 440 | 13.4 | 29 | | | | | 12.8 | 2.40 |
| 10 | 480 | 12.7 | 29 | | | | | >13.3 | 2.35 |
| 11 | 480 | 12.2 | 30 | | | | | 13.7 | 2.30 |
| 12 | 480 | 12.1 | 31 | | | | | 13.3 | 2.25 |
| 13 | 520 | 12.6 | 27 | | | | | 13.2 | 2.25 |
| 14 | 520 | 12.9 | 30 | | | | | >12.5 | 2.20 |
| 15 | 520 | 13.5 | 30 | | | | | 12.0 | 2.20 |
| 16 | (520) | 13.4 | 13 | | | | | >10.4 | (2.15) |
| 17 | --- | ---- | 0 | | | | | | |
| 18 | --- | >11.0 | 30 | | | | | | |
| 19 | --- | (9.7) | 11 | | | | | | |
| 20 | --- | >10.3 | 3 | | | | | | |
| 21 | --- | >12.5 | 3 | | | | | | |
| 22 | --- | >11.6 | 4 | | | | | | |
| 23 | --- | (11.0) | 4 | | | | | | |

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
* Height at 0.83 foF2.

Table 68

Kodaikanal, India (10.2° N, 77.5° E) March 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 11.8 | 11 | 255 | | | | | 2.90 |
| 01 | | 11.5 | 17 | 240 | | | | | 2.85 |
| 02 | | 11.0 | 21 | 235 | | | | | 2.90 |
| 03 | | 9.6 | 24 | 230 | | | | | 3.00 |
| 04 | | 8.7 | 21 | 235 | | | | | 3.05 |
| 05 | | 7.6 | 21 | 230 | | | | | 3.15 |
| 06 | | 7.8 | 25 | 260 | | --- | --- | | 2.95 |
| 07 | --- | 10.9 | 29 | 250 | --- | 115 | 2.8 | 7.0 | 2.85 |
| 08 | --- | 12.7 | 30 | 235 | --- | 110 | --- | 10.6 | 2.50 |
| 09 | --- | 13.3 | 29 | 225 | --- | --- | --- | 11.8 | 2.30 |
| 10 | --- | 12.4 | 30 | 220 | --- | --- | --- | 13.4 | 2.20 |
| 11 | --- | 11.8 | 28 | 215 | --- | --- | --- | 13.5 | 2.20 |
| 12 | --- | 11.8 | 29 | 215 | --- | --- | --- | 13.4 | 2.15 |
| 13 | --- | 12.3 | 29 | 210 | --- | 110 | --- | 13.2 | 2.15 |
| 14 | --- | 12.7 | 29 | 220 | --- | 110 | --- | 12.8 | 2.15 |
| 15 | --- | 12.9 | 29 | 230 | --- | 110 | --- | 11.4 | 2.15 |
| 16 | --- | 13.1 | 31 | 240 | --- | 120 | 3.3 | 8.6 | 2.15 |
| 17 | --- | 12.8 | 30 | 260 | --- | 120 | --- | 8.0 | 2.10 |
| 18 | | 11.9 | 30 | 300 | | | | | 2.05 |
| 19 | | (9.8) | 27 | 450 | | | | | (1.95) |
| 20 | | (10.0) | 10 | 430 | | | | | (2.00) |
| 21 | | (10.8) | 5 | 400 | | | | | (2.25) |
| 22 | | (11.7) | 5 | 320 | | | | | (2.50) |
| 23 | | (10.8) | 8 | 270 | | | | | (2.60) |

Time: 75.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 69

Trivandrum, India (8.5° N, 77.0° E) March 1959

| Time | * | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | --- | >10.0 | 7 | | | | | | |
| 01 | --- | >10.0 | 7 | | | | | | |
| 02 | --- | >9.9 | 8 | | | | | | |
| 03 | --- | >9.2 | 8 | | | | | | ---- |
| 04 | --- | >9.0 | 9 | | | | | | ---- |
| 05 | 280 | 7.4 | 13 | | | | | | (3.30) |
| 06 | 320 | 7.8 | 24 | | | | | | 3.00 |
| 07 | 360 | 10.8 | 30 | | | | | >4.8 | 2.90 |
| 08 | 400 | 12.7 | 31 | | | | | >11.3 | 2.60 |
| 09 | 440 | 13.0 | 30 | | | | | 12.6 | 2.40 |
| 10 | 480 | 12.6 | 28 | | | | | 13.0 | 2.35 |
| 11 | 480 | 12.0 | 28 | | | | | 13.1 | 2.35 |
| 12 | 480 | 12.1 | 31 | | | | | 13.0 | 2.35 |
| 13 | 480 | >12.5 | 30 | | | | | 13.0 | 2.30 |
| 14 | 480 | 13.0 | 14 | | | | | 12.5 | 2.30 |
| 15 | 480 | >13.0 | 28 | | | | | 11.2 | 2.30 |
| 16 | 520 | 13.3 | 30 | | | | | >9.4 | 2.30 |
| 17 | --- | >12.7 | 25 | | | | | | ---- |
| 18 | --- | >10.5 | 21 | | | | | | |
| 19 | --- | >9.5 | 10 | | | | | | |
| 20 | --- | >9.5 | 5 | | | | | | |
| 21 | --- | >10.3 | 2 | | | | | | |
| 22 | --- | >10.5 | 5 | | | | | | ---- |
| 23 | --- | >9.7 | 8 | | | | | | |

Time: 75.0°E.
Sweep: 1.5 Mc to 15.0 Mc in 5 minutes, manual operation.
* Height at 0.83 foF2.

Table 70

Upsala, Sweden (59.8° N, 17.6° E) February 1959

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 4.1 | 27 | 320 | | | | 2.4 | 2.4 |
| 01 | | 4.0 | 27 | 325 | | --- | ---- | 2.7 | 2.4 |
| 02 | | 3.6 | 26 | 320 | | --- | ---- | 2.6 | 2.3 |
| 03 | | 3.3 | 28 | 320 | | | | 2.6 | 2.4 |
| 04 | | 3.6 | 26 | 300 | | | | 2.4 | 2.4 |
| 05 | | 3.5 | 28 | 290 | | | | 2.5 | 2.5 |
| 06 | | 3.8 | 28 | 270 | | --- | ---- | 2.3 | 2.5 |
| 07 | | 5.0 | 28 | 250 | | --- | 0.70 | 2.8 | 2.6 |
| 08 | | 7.0 | 28 | 240 | --- | 115 | 1.80 | 3.0 | 2.8 |
| 09 | --- | 9.0 | 28 | 240 | --- | 115 | 2.30 | 2.8 | 2.9 |
| 10 | --- | 10.4 | 28 | 240 | --- | 115 | 2.60 | 3.1 | 2.9 |
| 11 | --- | 11.4 | 28 | 240 | --- | 115 | 2.85 | | 2.9 |
| 12 | --- | 12.6 | 28 | 240 | --- | 115 | 2.85 | | 2.9 |
| 13 | --- | 13.0 | 28 | 235 | --- | 115 | 2.80 | 3.0 | 2.9 |
| 14 | --- | 12.7 | 28 | 235 | --- | 115 | 2.70 | 3.0 | 2.9 |
| 15 | | 12.2 | 28 | 235 | | 115 | 2.30 | 2.8 | 2.9 |
| 16 | | 11.2 | 28 | 230 | | 115 | 1.90 | 2.6 | 2.9 |
| 17 | | 10.5 | 27 | 230 | | --- | 1.25 | 2.6 | 2.9 |
| 18 | | 8.2 | 27 | 230 | | --- | E | 1.0 | 2.8 |
| 19 | | 7.0 | 27 | 240 | | --- | ---- | 1.0 | 2.6 |
| 20 | | 5.3 | 26 | 260 | | --- | ---- | 0.6 | 2.65 |
| 21 | | 4.8 | 27 | 280 | | | | 1.7 | 2.5 |
| 22 | | 4.7 | 28 | 300 | | | | 1.6 | 2.4 |
| 23 | | 4.7 | 27 | 310 | | | | 2.4 | 2.4 |

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.
Occasionally, 0.3 Mc to 20.0 Mc in 3 minutes.

Table 71

Freiburg, Germany (48.1° N, 7.8° E) July 1954

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.6 | 30 | 262 | | | | 2.8 | 3.07 |
| 01 | | 3.4 | 26 | 270 | | | | 2.4 | 3.03 |
| 02 | | 3.2 | 26 | 270 | | | | 2.7 | 3.00 |
| 03 | | 3.0 | 28 | 270 | | | | 2.8 | 3.00 |
| 04 | | 3.0 | 29 | 260 | | | | 2.6 | 3.09 |
| 05 | 325 | 3.5 | 27 | 240 | 2.80 | 129 | 1.59 | 2.6 | 3.05 |
| 06 | 380 | 4.2 | 26 | 232 | 3.40 | 116 | 2.16 | 3.2 | 2.94 |
| 07 | 370 | 4.2 | 21 | 220 | 3.70 | 111 | 2.48 | 3.6 | 2.93 |
| 08 | 372 | 4.6 | 22 | (208) | 3.90 | 109 | 2.78 | 4.2 | 3.01 |
| 09 | 335 | 5.0 | 24 | 210 | 4.00 | 105 | 2.98 | 4.2 | 3.06 |
| 10 | 360 | 5.0 | 22 | 215 | 4.15 | 105 | 3.08 | 4.0 | 3.10 |
| 11 | 365 | 4.8 | 27 | (215) | 4.20 | 105 | 3.16 | 3.5 | 3.11 |
| 12 | 388 | 4.9 | 26 | 205 | 4.20 | 104 | 3.22 | 3.8 | 3.02 |
| 13 | 395 | 4.7 | 22 | (225) | 4.20 | 104 | 3.21 | 3.8 | 2.98 |
| 14 | 410 | 4.6 | 24 | (220) | 4.15 | 104 | 3.13 | 3.6 | 2.87 |
| 15 | 372 | 4.7 | 24 | (220) | 4.00 | 105 | 3.03 | 3.8 | 3.02 |
| 16 | 370 | 4.6 | 27 | 228 | 3.90 | 107 | 2.82 | 3.0 | 3.00 |
| 17 | 340 | 4.6 | 26 | (225) | 3.75 | 111 | 2.58 | 3.2 | 3.06 |
| 18 | 315 | 4.9 | 25 | 240 | 3.40 | 117 | 2.20 | 4.1 | 3.07 |
| 19 | 290 | 5.4 | 25 | (250) | | 125 | 1.61 | 3.6 | 3.12 |
| 20 | | 5.6 | 29 | 250 | | | | 3.3 | 3.20 |
| 21 | | 5.4 | 28 | 245 | | | | 3.3 | 3.22 |
| 22 | | 4.7 | 30 | 240 | | | | 3.1 | 3.20 |
| 23 | | 4.0 | 29 | 255 | | | | 3.2 | 3.08 |

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 72

Freiburg, Germany (48.1° N, 7.8° E) June 1954

| Time | h'F2 | foF2-Count | | h'F | foF1 | h'E | foE | foEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|---|
| 00 | | 3.8 | 29 | 250 | | | | 2.2 | 3.13 |
| 01 | | 3.6 | 27 | 255 | | | | 1.6 | 3.08 |
| 02 | | 3.4 | 30 | 262 | | | | 1.5 | 3.03 |
| 03 | | 3.2 | 29 | 270 | | | | 1.8 | 3.03 |
| 04 | 315 | 3.3 | 28 | 268 | | | | 2.0 | 3.09 |
| 05 | 328 | 4.0 | 29 | 242 | 3.02 | 127 | 1.73 | 2.4 | 3.10 |
| 06 | 322 | 4.4 | 28 | 240 | 3.50 | 113 | 2.24 | 3.1 | 3.13 |
| 07 | 320 | 4.6 | 24 | 228 | 3.80 | 110 | 2.55 | 3.4 | 3.22 |
| 08 | 318 | 4.8 | 28 | 220 | 3.95 | 108 | 2.80 | 3.9 | 3.15 |
| 09 | 338 | 4.9 | 27 | 212 | 4.20 | 104 | 2.99 | 3.9 | 3.18 |
| 10 | 340 | 5.0 | 26 | 215 | 4.25 | 104 | 3.10 | 4.0 | 3.22 |
| 11 | 360 | 5.0 | 25 | 210 | 4.25 | 104 | 3.18 | 4.0 | 3.12 |
| 12 | 392 | 4.9 | 29 | 202 | 4.25 | 104 | 3.24 | 4.2 | 2.96 |
| 13 | 380 | 4.8 | 22 | 210 | 4.20 | 104 | 3.19 | 3.9 | 2.99 |
| 14 | 380 | 4.8 | 24 | 215 | 4.20 | 105 | 3.12 | 3.7 | 2.96 |
| 15 | 355 | 4.8 | 23 | 222 | 4.08 | 105 | 3.00 | 3.3 | 3.08 |
| 16 | 348 | 4.9 | 26 | 220 | 3.90 | 108 | 2.83 | 3.4 | 3.11 |
| 17 | 340 | 4.9 | 25 | 235 | 3.75 | 111 | 2.60 | 3.0 | 3.08 |
| 18 | 305 | 5.2 | 24 | 235 | 3.50 | 117 | 2.23 | 3.6 | 3.12 |
| 19 | 280 | 5.6 | 28 | 250 | | 126 | 1.68 | 3.2 | 3.14 |
| 20 | | 6.2 | 28 | 250 | | | | 3.1 | 3.18 |
| 21 | | 5.8 | 26 | 240 | | | | 2.8 | 3.24 |
| 22 | | 5.2 | 28 | 235 | | | | 2.9 | 3.24 |
| 23 | | 4.6 | 27 | 238 | | | | 2.4 | 3.21 |

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

US-COMM-NBS-BL

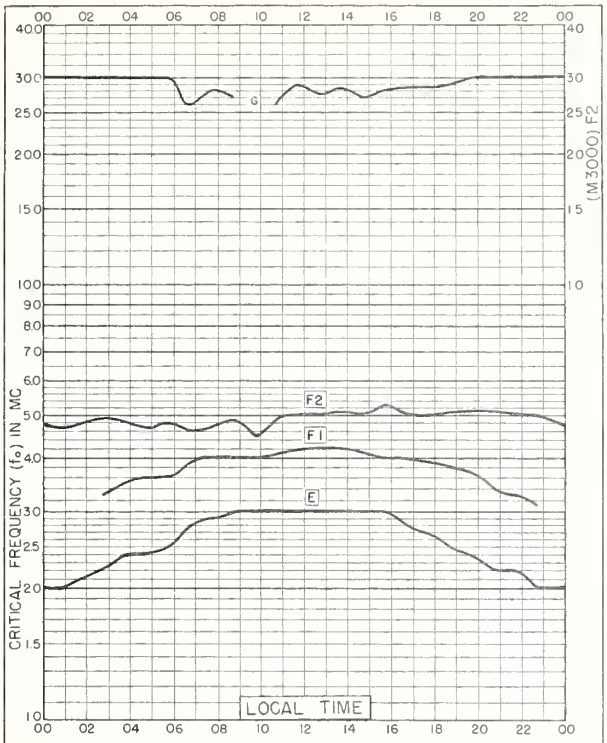


Fig. 1. RESOLUTE BAY, CANADA
74.7°N, 94.9°W JULY 1961

NBS 503

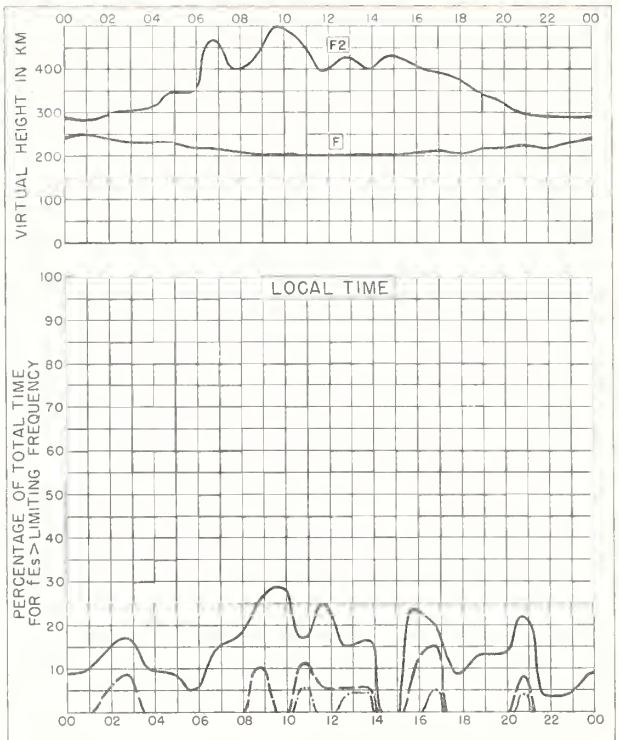


Fig. 2. RESOLUTE BAY, CANADA JULY 1961

NBS 490

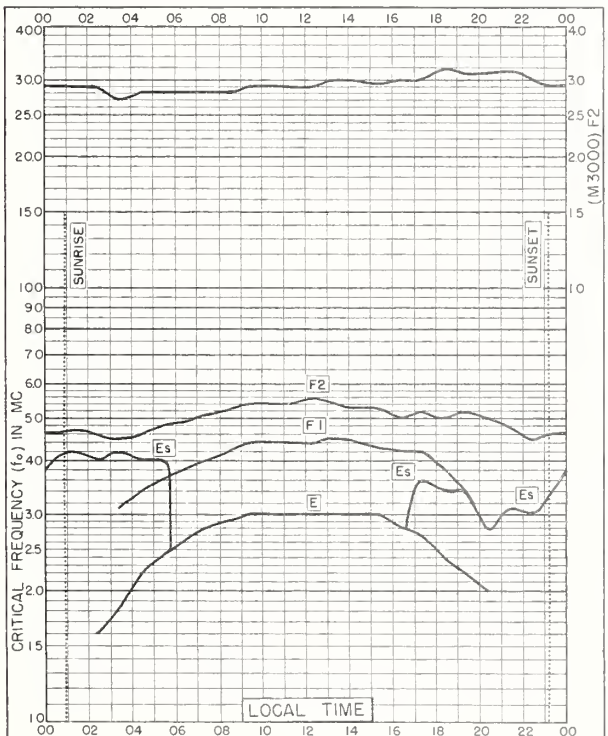


Fig. 3. KIRUNA, SWEDEN
67.8°N, 20.4°E JULY 1961

NBS 503

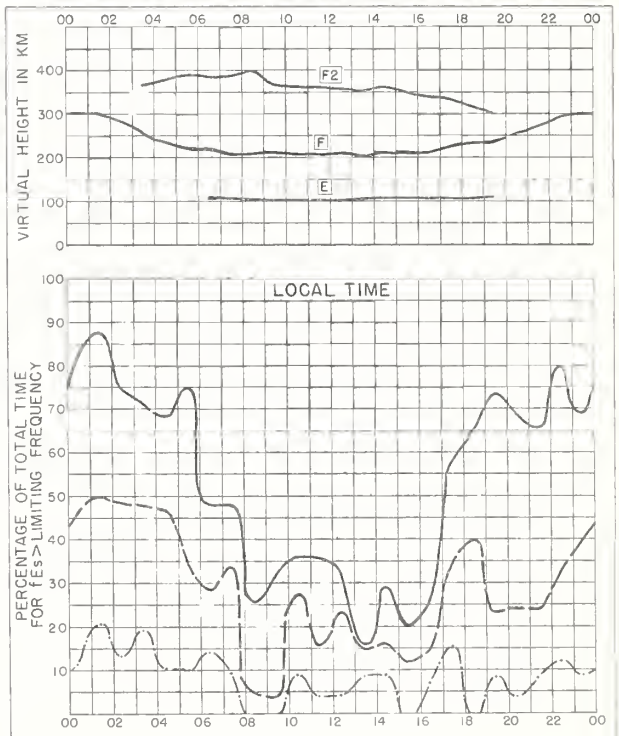


Fig. 4. KIRUNA, SWEDEN JULY 1961

NBS 490

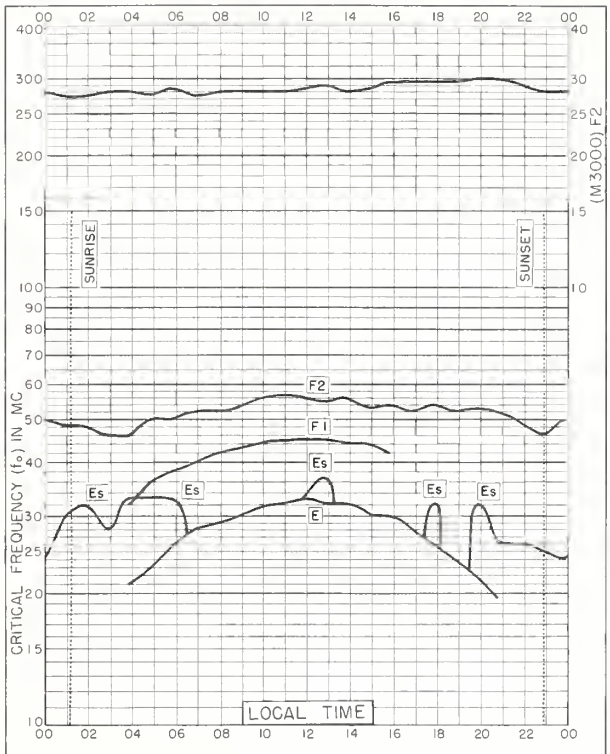


Fig. 5. SODANKYLA, FINLAND
67.4°N, 26.6°E JULY 1961

NBS 503

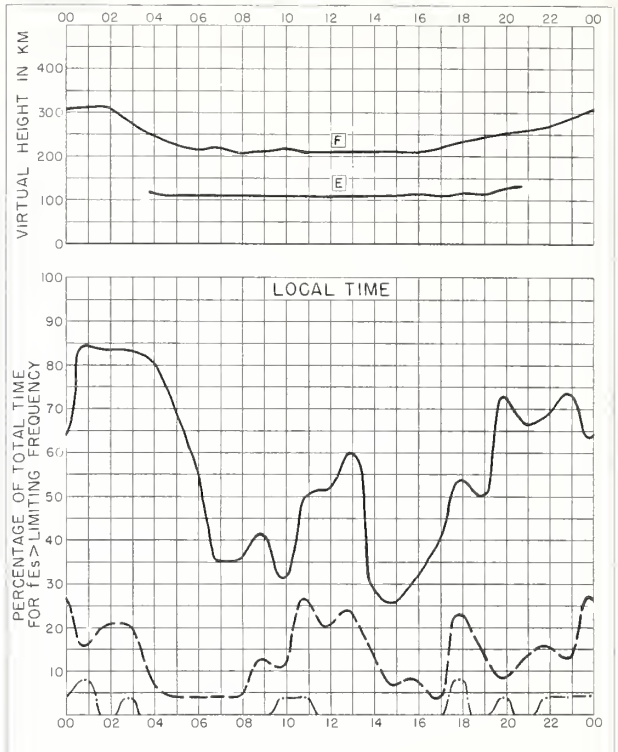


Fig. 6. SODANKYLA, FINLAND JULY 1961

NBS 490

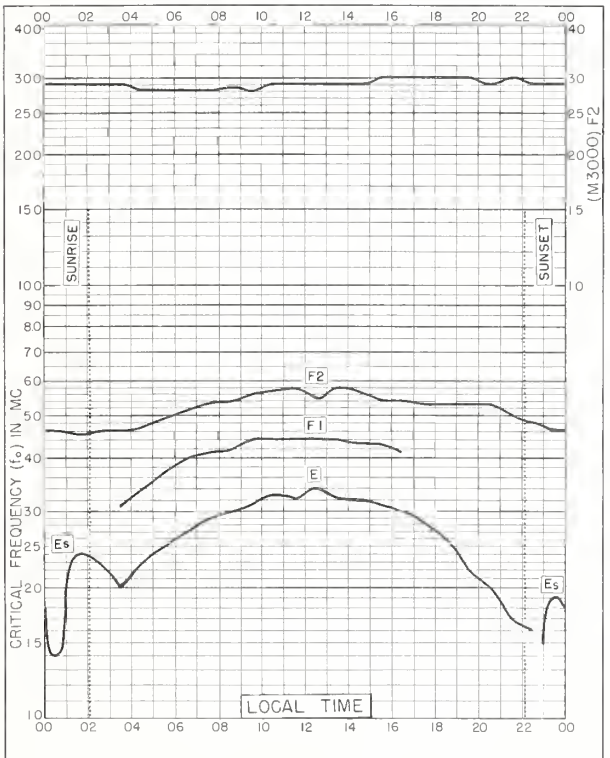


Fig. 7. LULEA, SWEDEN
65.6°N, 22.1°E JULY 1961

NBS 503

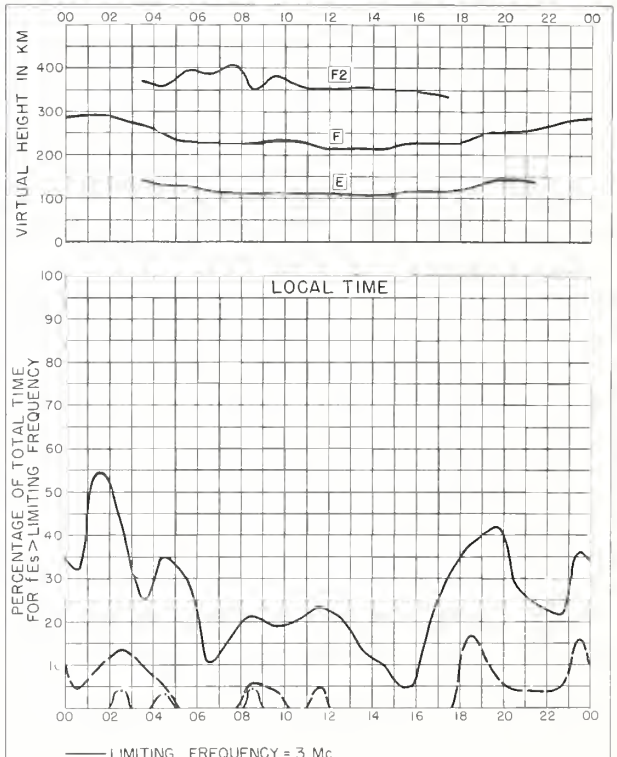


Fig. 8. LULEA, SWEDEN JULY 1961

NBS 490

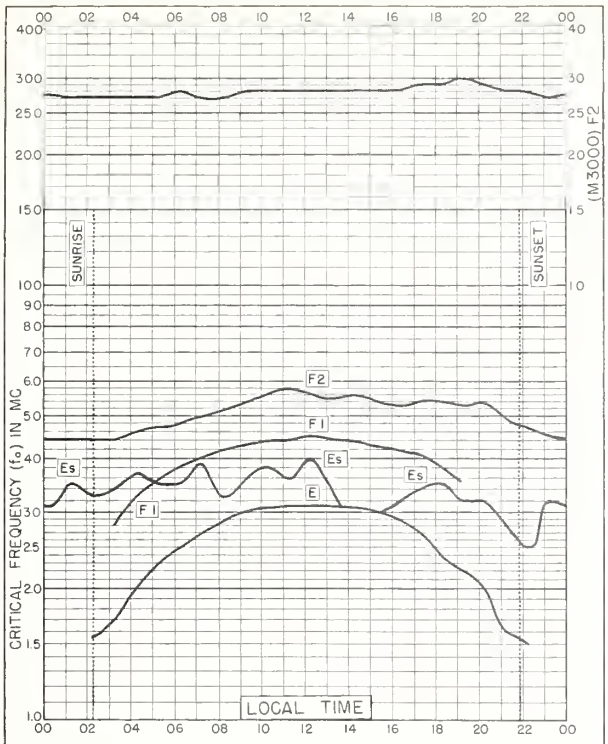


Fig. 9. LYCKSELE, SWEDEN
64.7°N, 18.8°E JULY 1961

NBS 503

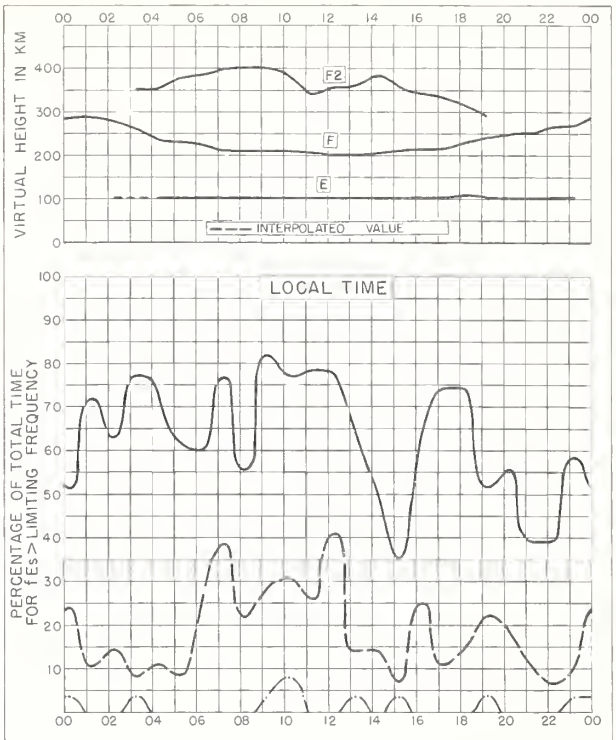


Fig. 10. LYCKSELE, SWEDEN JULY 1961

NBS 490

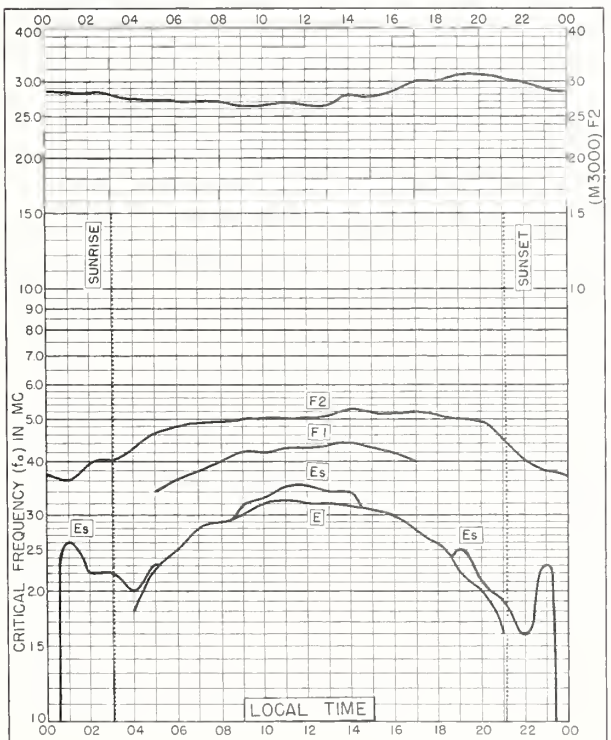


Fig. 11. ANCHORAGE, ALASKA
61.2°N, 149.9°W JULY 1961

NBS 503

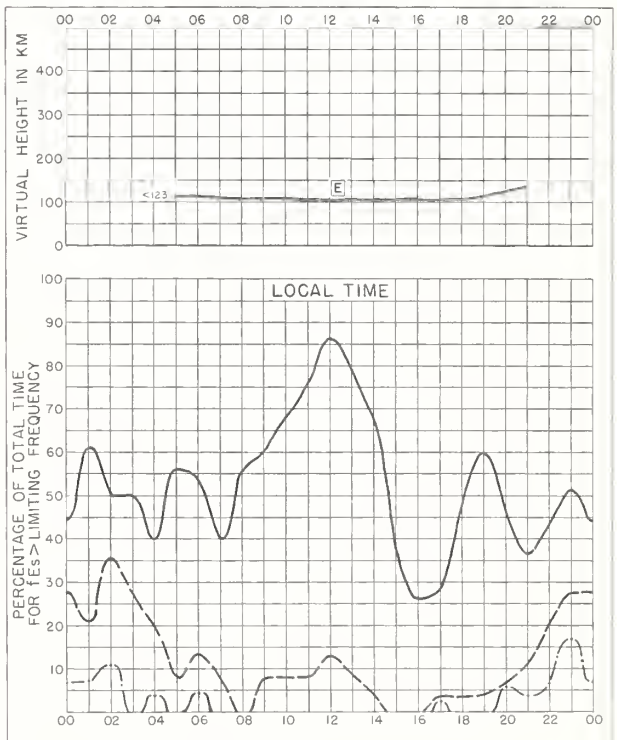


Fig. 12. ANCHORAGE, ALASKA JULY 1961

NBS 490

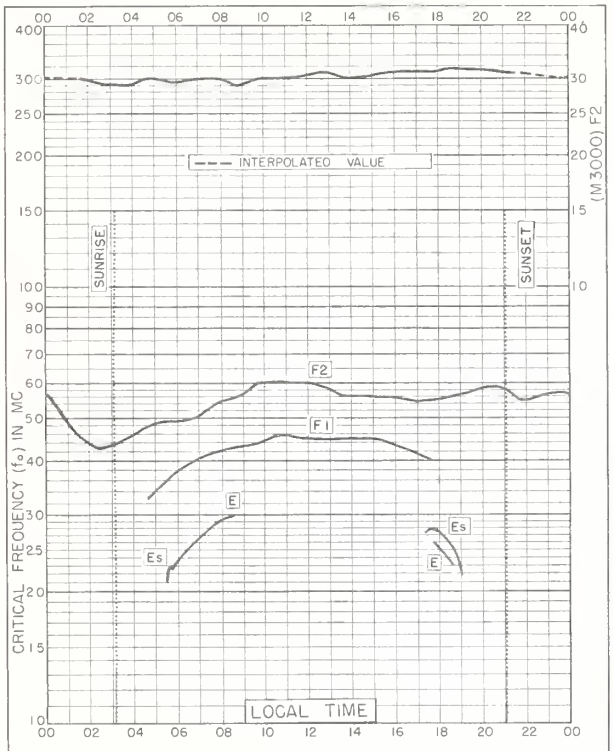


Fig. 13. NURMIJARVI, FINLAND
60.5°N, 24.6°E JULY 1961

NBS 503

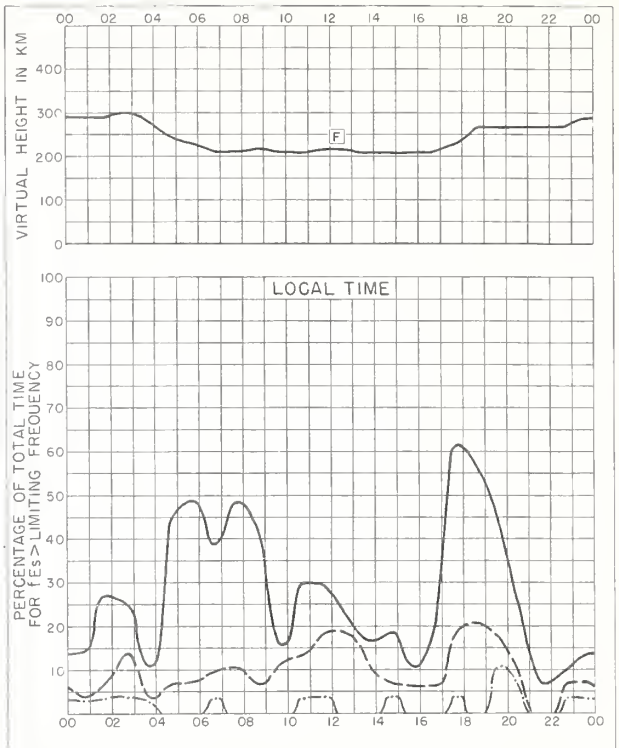


Fig. 14. NURMIJARVI, FINLAND JULY 1961

NBS 490

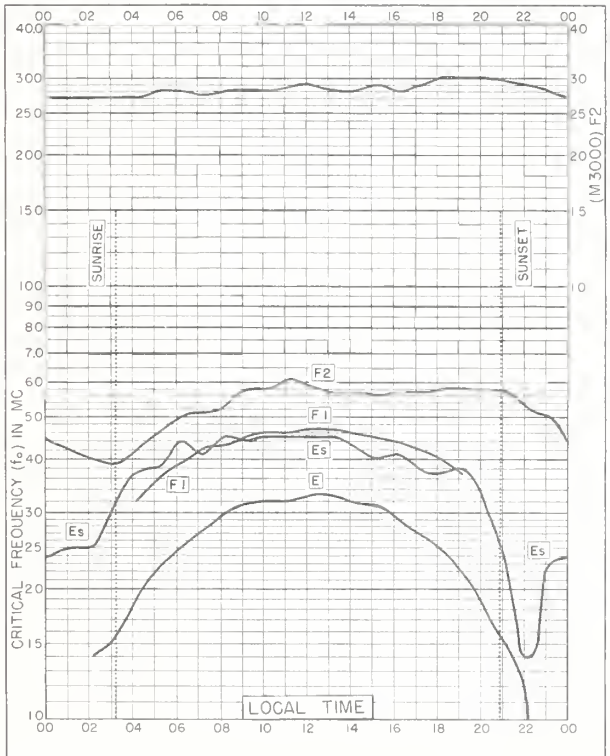


Fig. 15. UPSALA, SWEDEN
59.8°N, 17.6°E JULY 1961

NBS 503

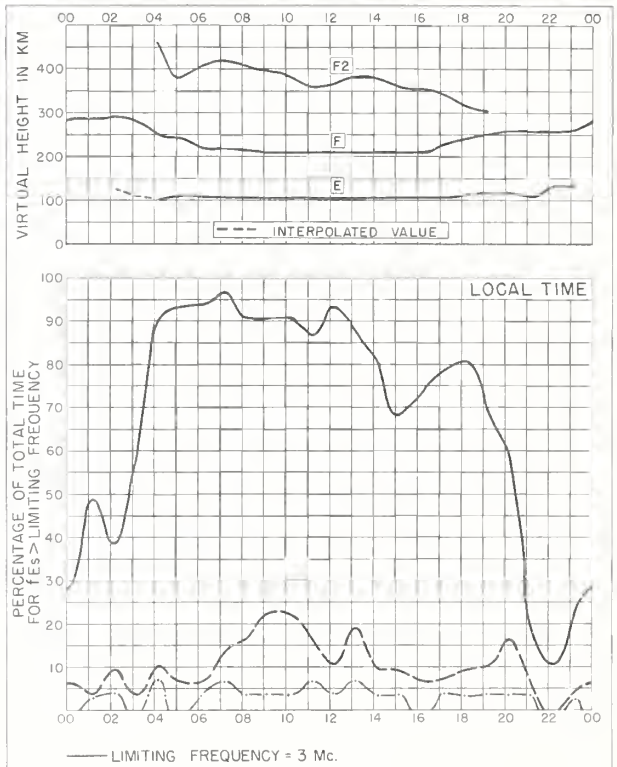


Fig. 16. UPSALA, SWEDEN JULY 1961

NBS 490

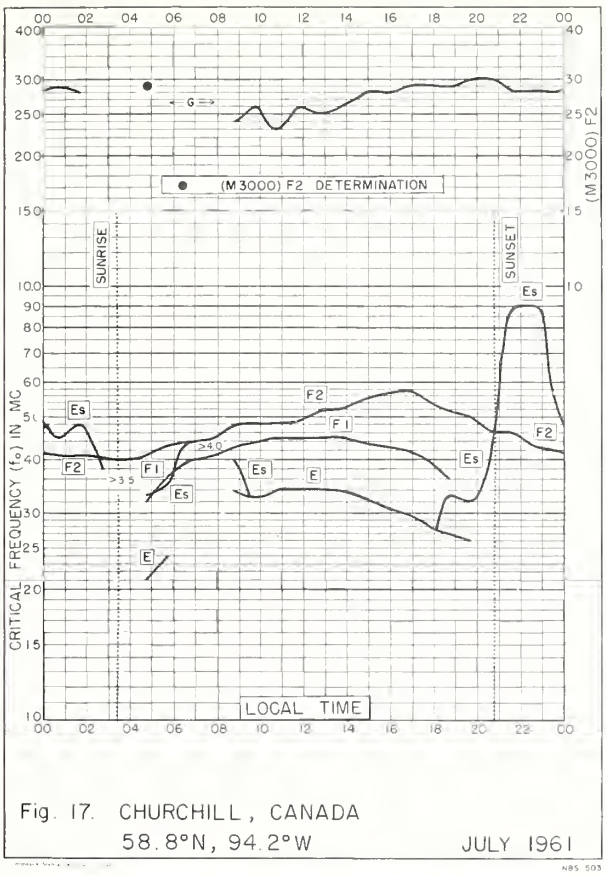


Fig. 17. CHURCHILL, CANADA
58.8°N, 94.2°W JULY 1961

NBS 503

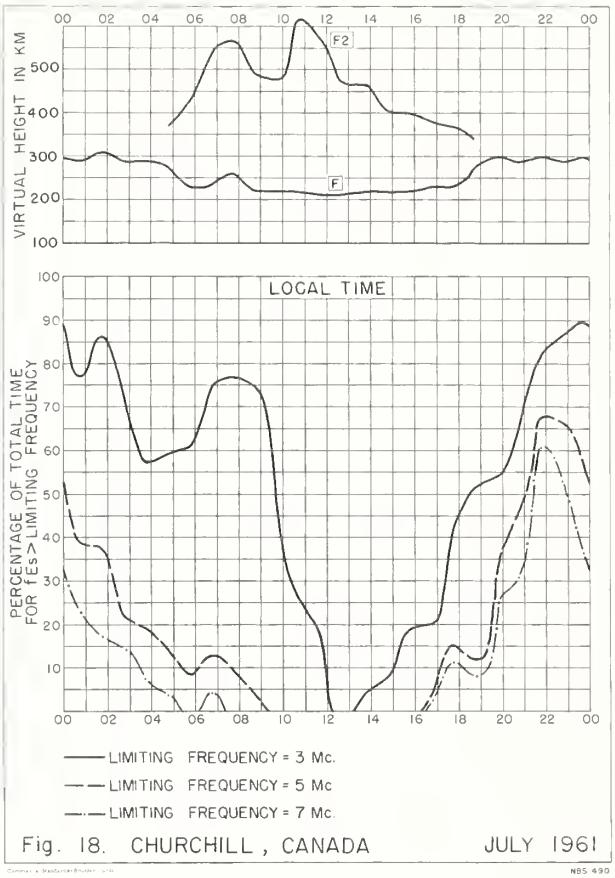


Fig. 18. CHURCHILL, CANADA JULY 1961

NBS 490

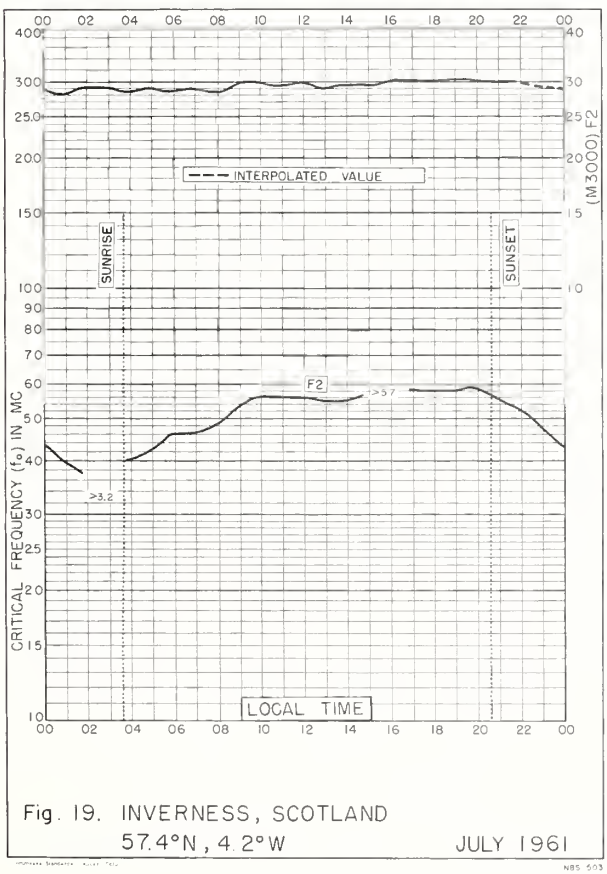


Fig. 19. INVERNESS, SCOTLAND
57.4°N, 4.2°W JULY 1961

NBS 503

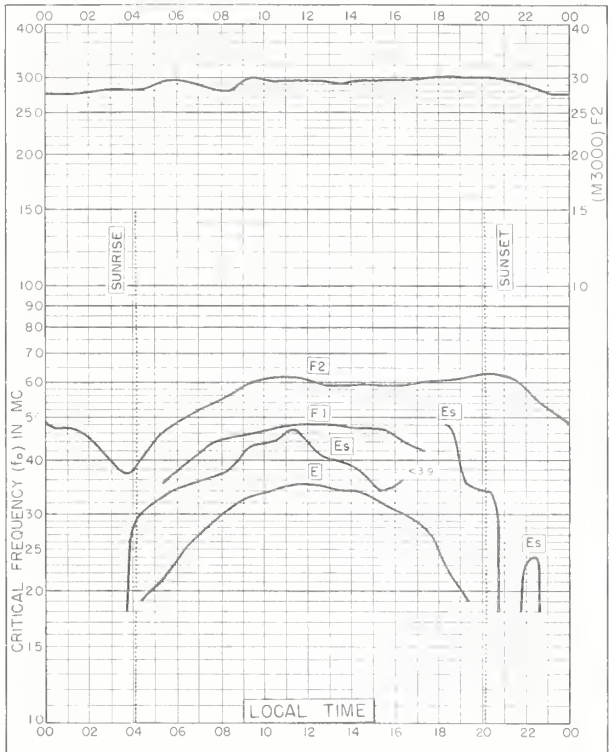


Fig. 20. De BILT, HOLLAND
52.1°N, 5.2°E JULY 1961

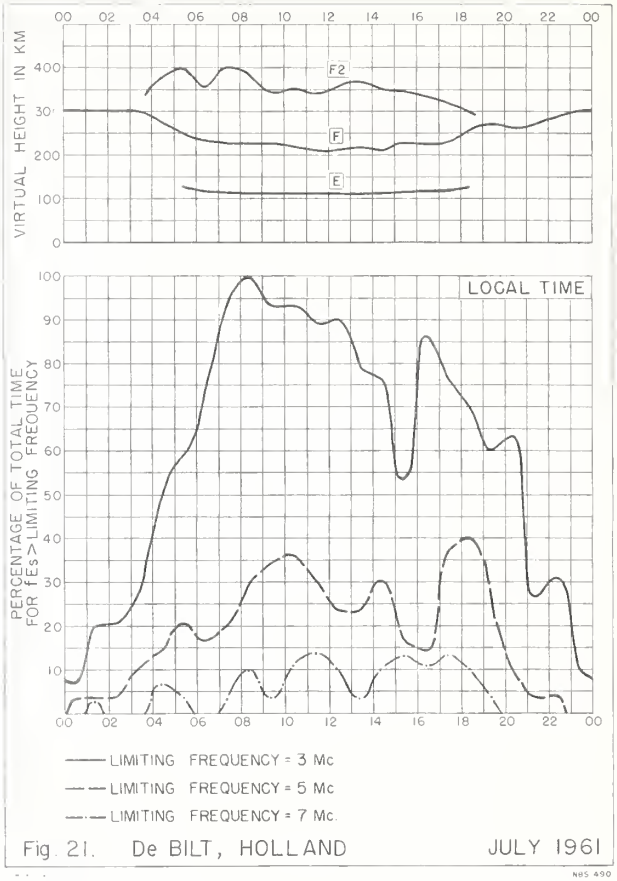


Fig. 21. De BILT, HOLLAND JULY 1961

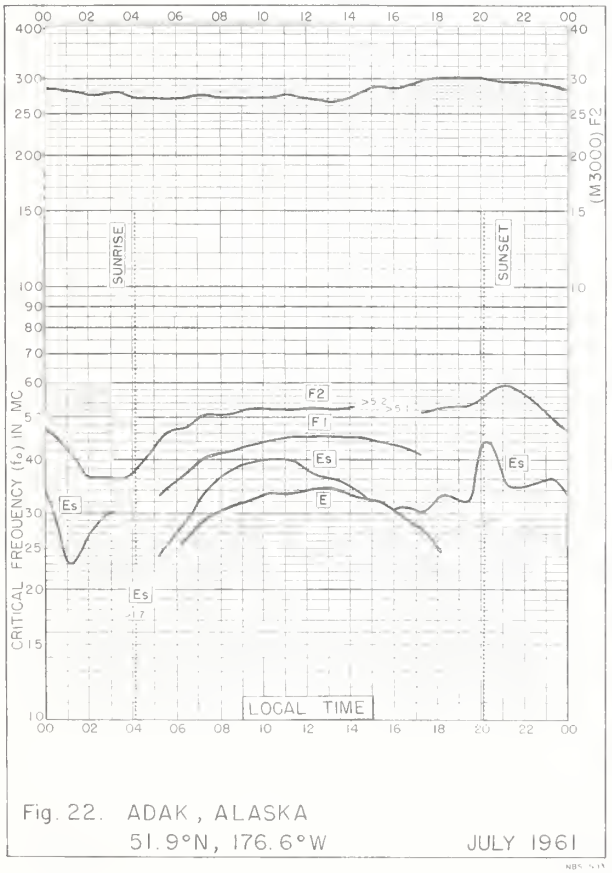


Fig. 22. ADAK, ALASKA
51.9°N, 176.6°W JULY 1961

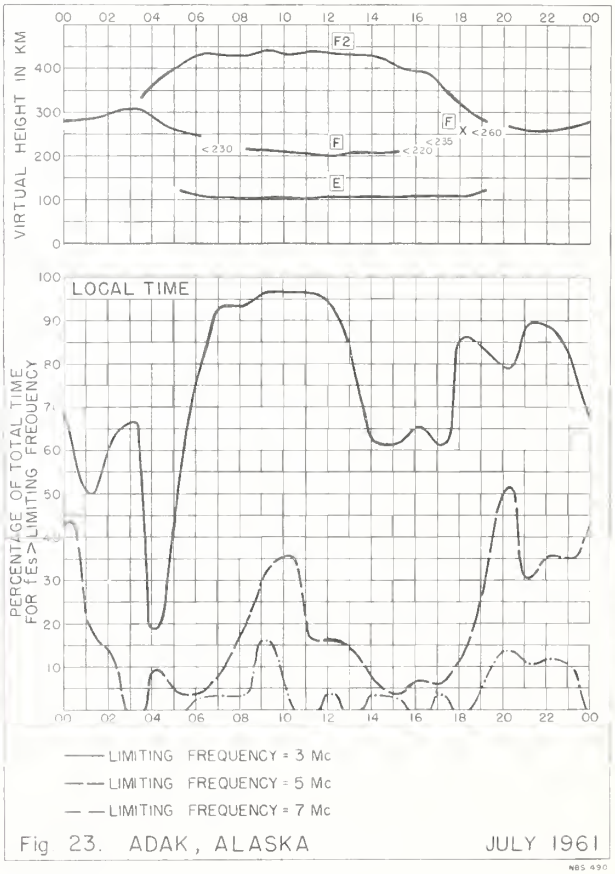


Fig. 23. ADAK, ALASKA JULY 1961

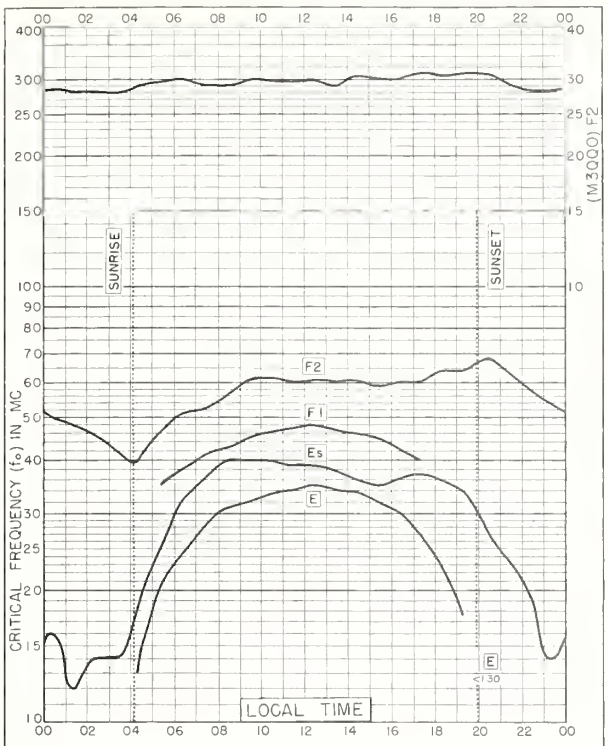


Fig. 24. DOURBES, BELGIUM
50.1°N, 4.6°E JULY 1961

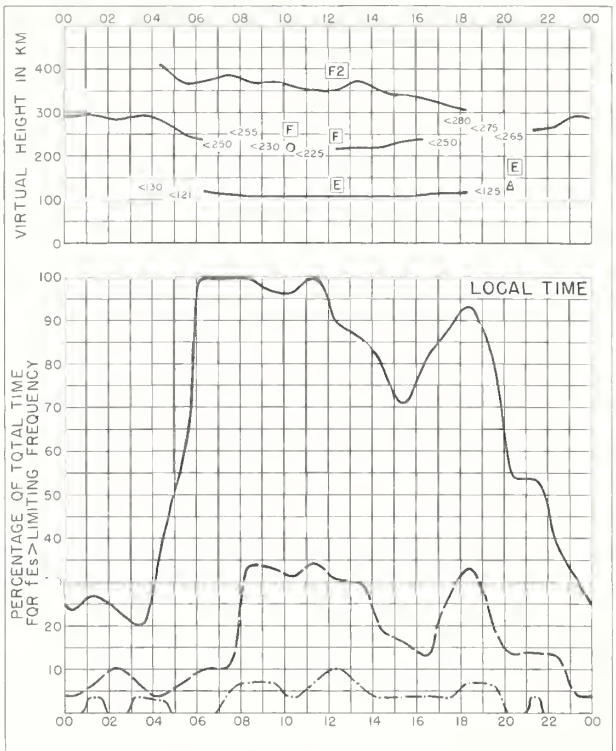


Fig. 25. DOURBES, BELGIUM JULY 1961


Fig. 26. PRUHONICE, CZECHOSLOVAKIA
50.0°N, 14.6°E JULY 1961

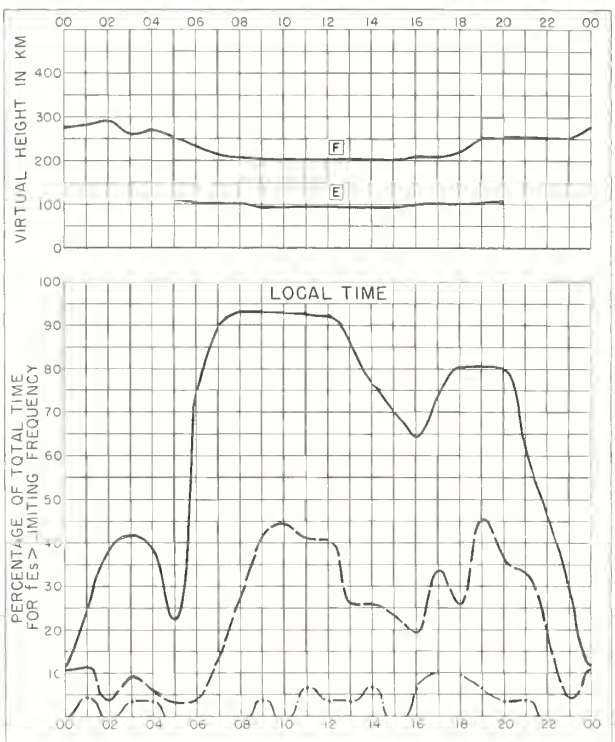


Fig. 27. PRUHONICE, CZECHOSLOVAKIA JULY 1961

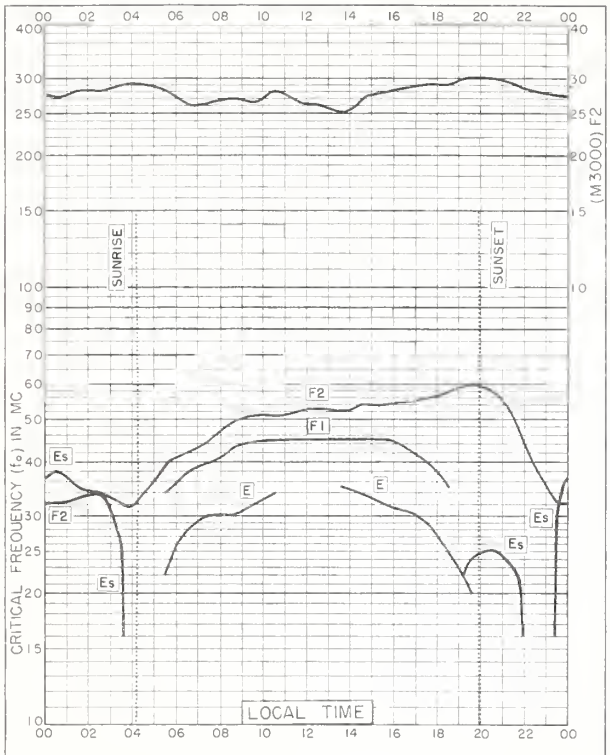


Fig. 28. WINNIPEG, CANADA
49.9°N, 97.4°W JULY 1961

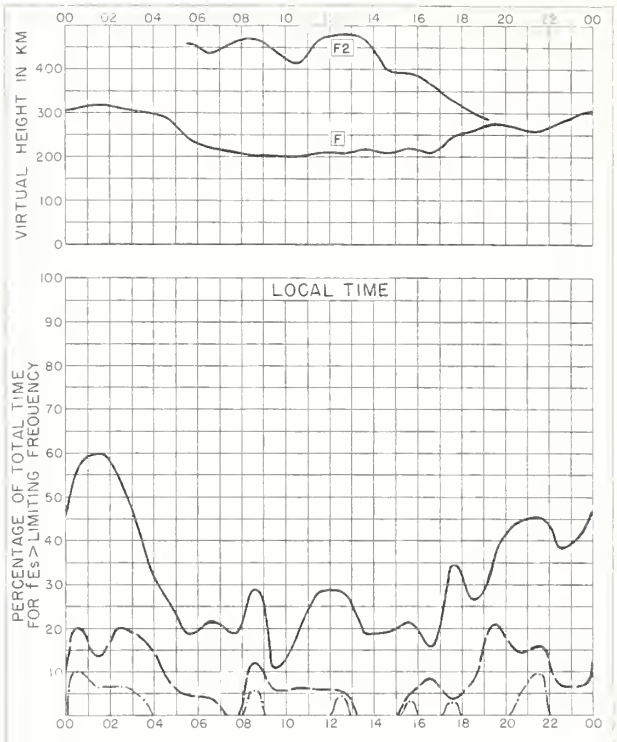


Fig. 29. WINNIPEG, CANADA JULY 1961

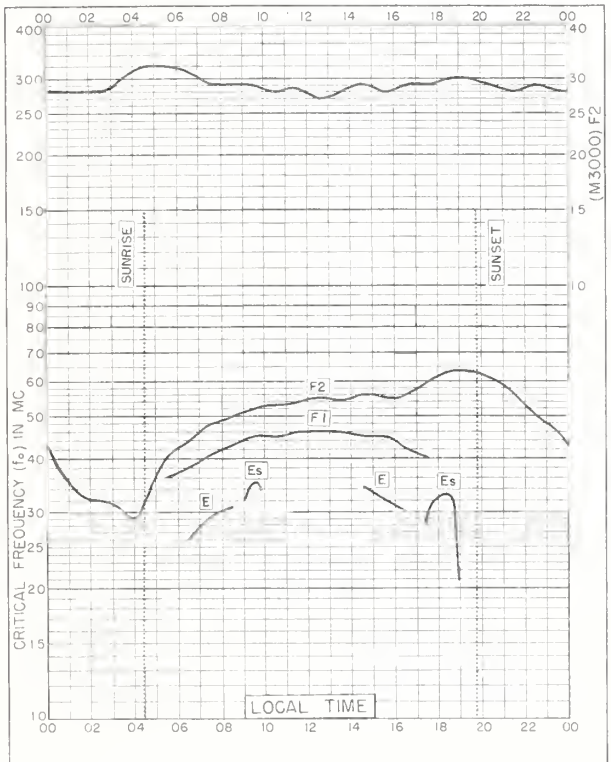


Fig. 30. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W JULY 1961

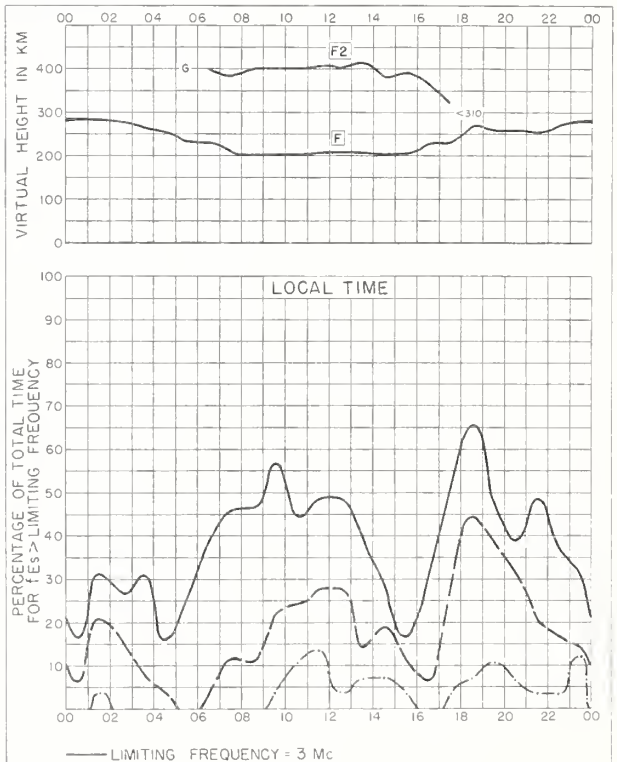


Fig. 31. ST. JOHN'S, NEWFOUNDLAND JULY 1961

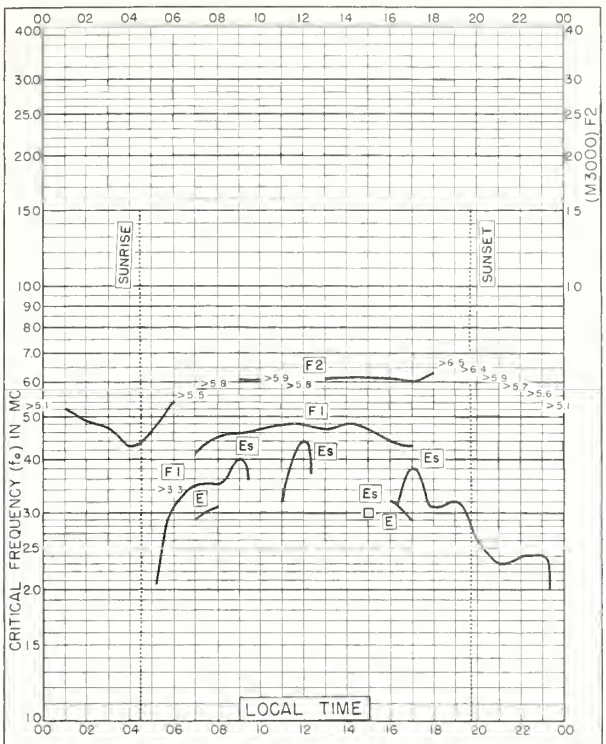


Fig. 32. GRAZ, AUSTRIA
47.1°N, 15.5°E JULY 1961

NBS 503

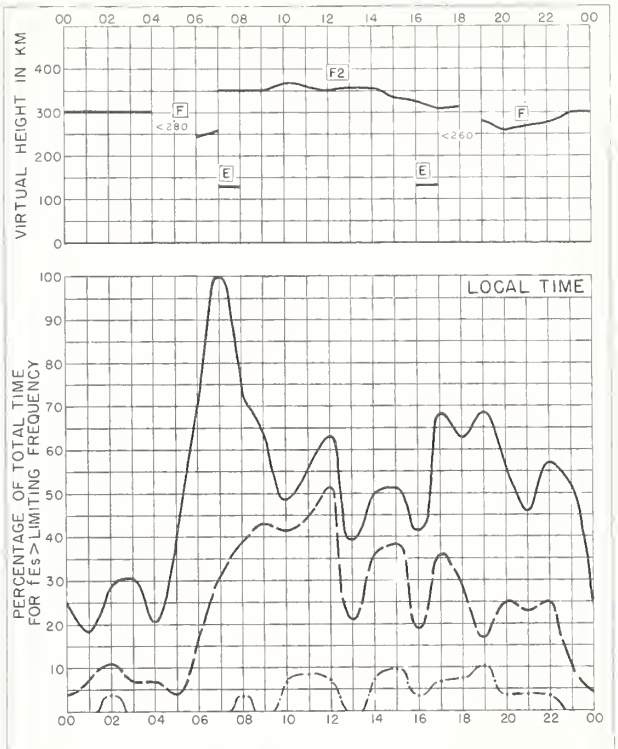


Fig. 33. GRAZ, AUSTRIA JULY 1961

NBS 490

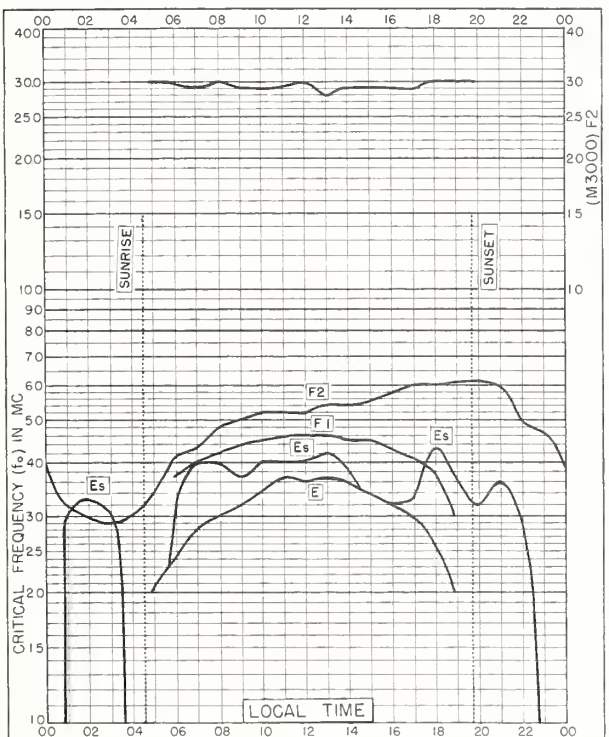


Fig. 34. OTTAWA, CANADA
45.4°N, 75.9°W JULY 1961

NBS 503

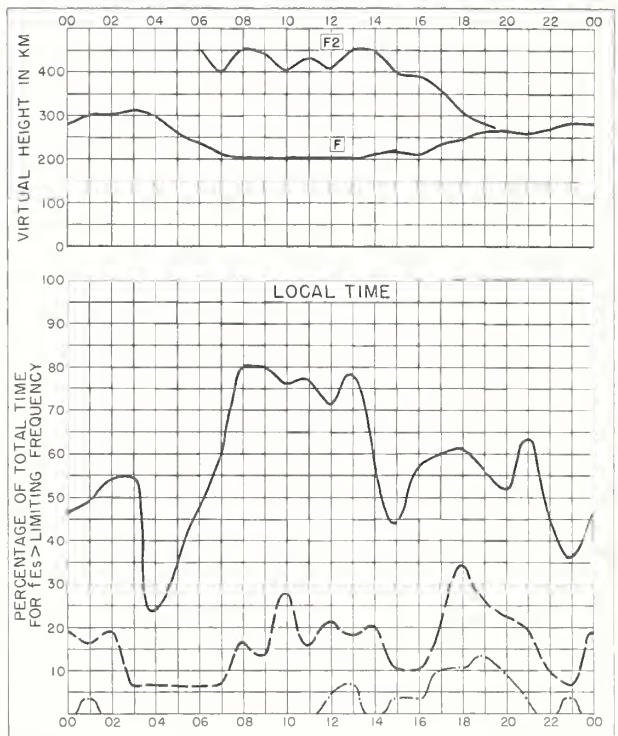


Fig. 35. OTTAWA, CANADA JULY 1961

NBS 490

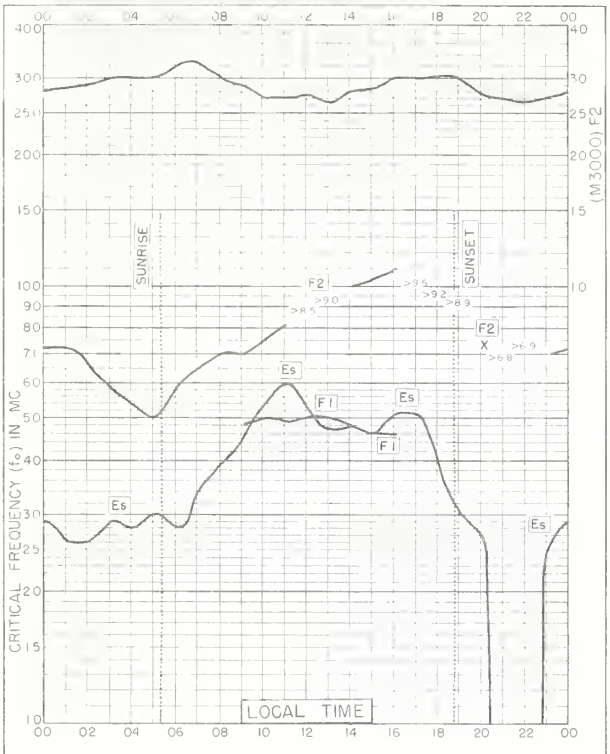


Fig. 36. FORMOSA , CHINA
25.0°N, 121.5°E JULY 1961

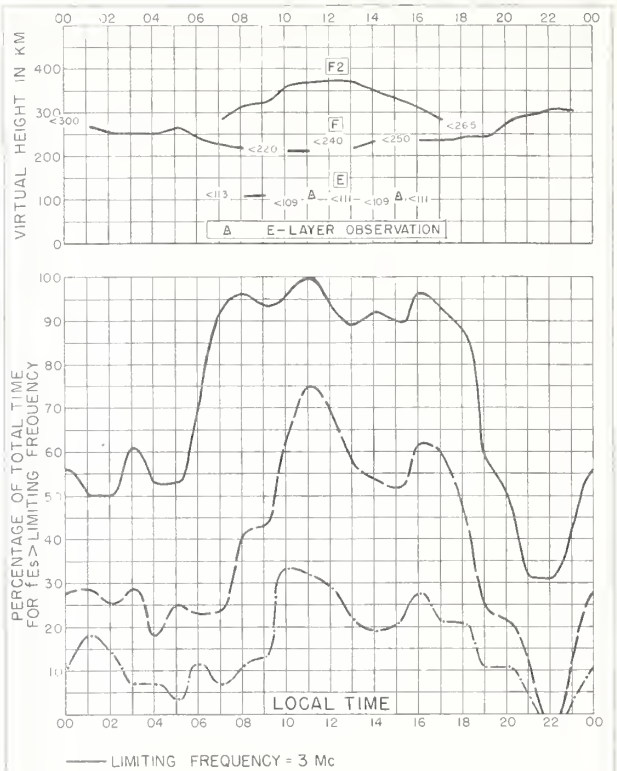


Fig. 37. FORMOSA , CHINA JULY 1961

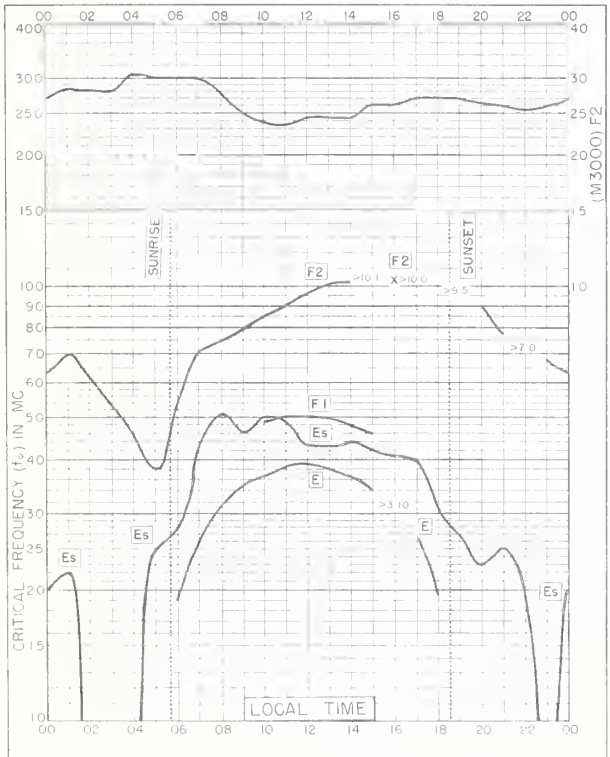


Fig. 38. BAGUIO , P. I
16 4°N, 120.6°E JULY 1961

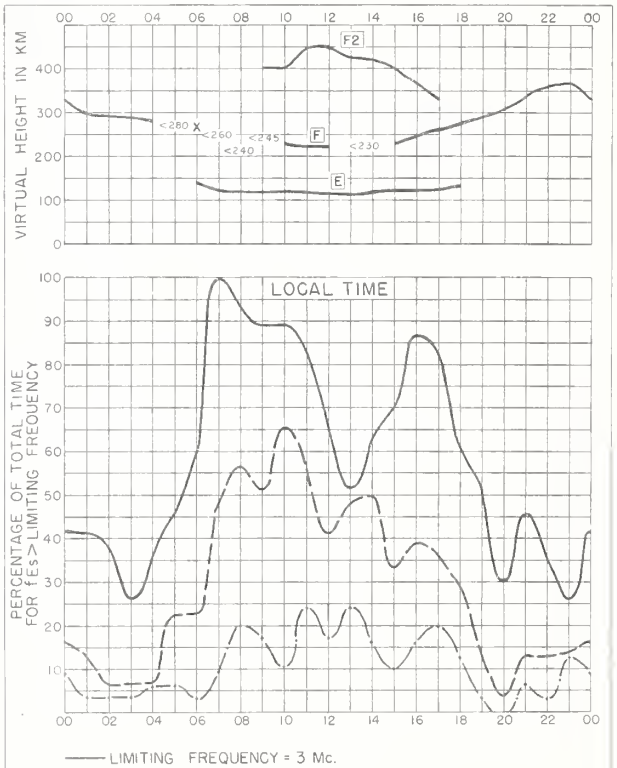


Fig. 39. BAGUIO, P. I. JULY 1961

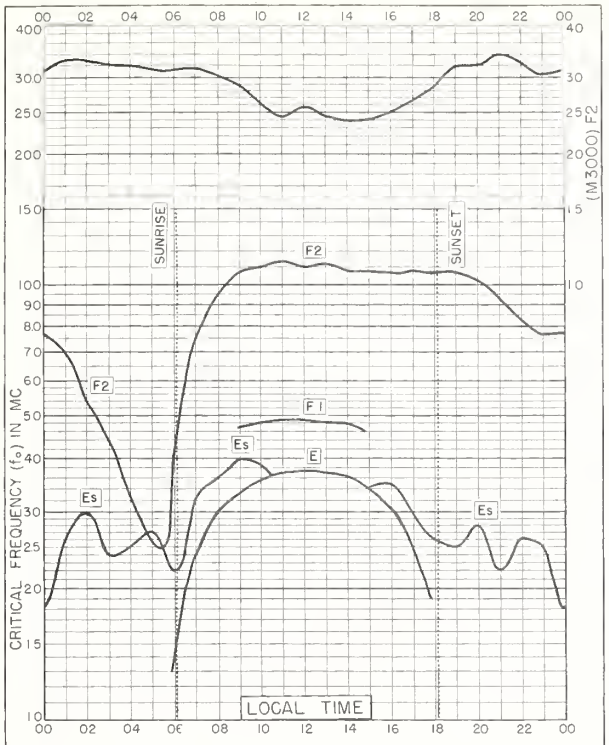


Fig. 40. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E JULY 1961

NBS 503

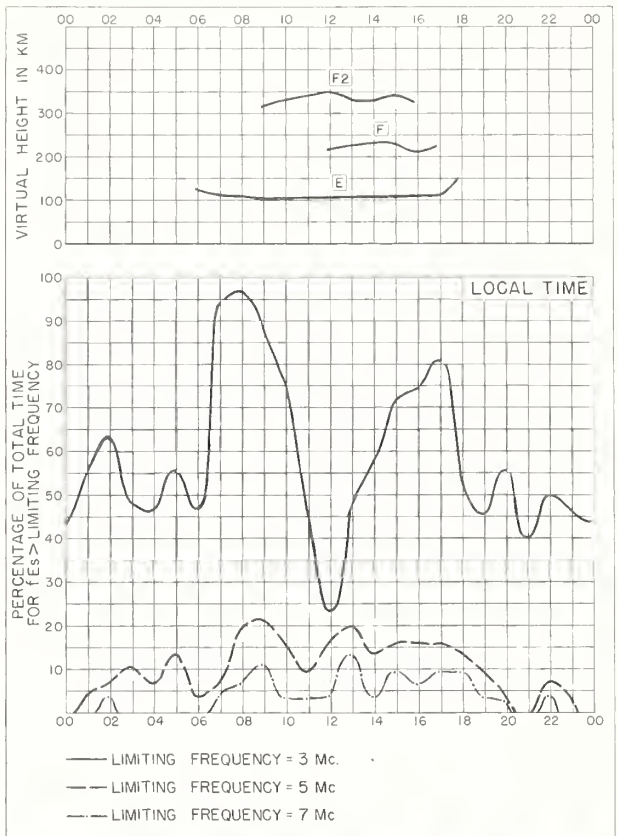


Fig. 41. SINGAPORE, BRITISH MALAYA JULY 1961

NBS 490


Fig. 42. BRISBANE, AUSTRALIA
27.5°S, 152.9°E JULY 1961

NBS 503

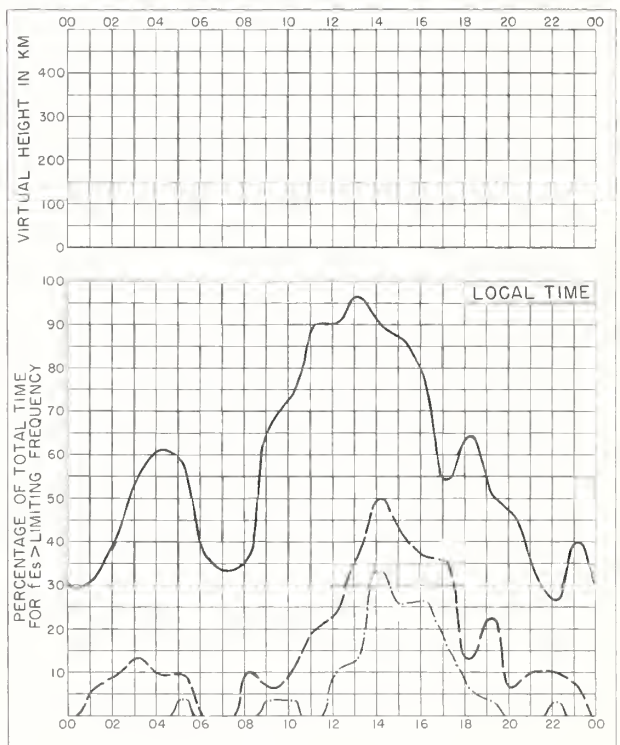


Fig. 43. BRISBANE, AUSTRALIA JULY 1961

NBS 490

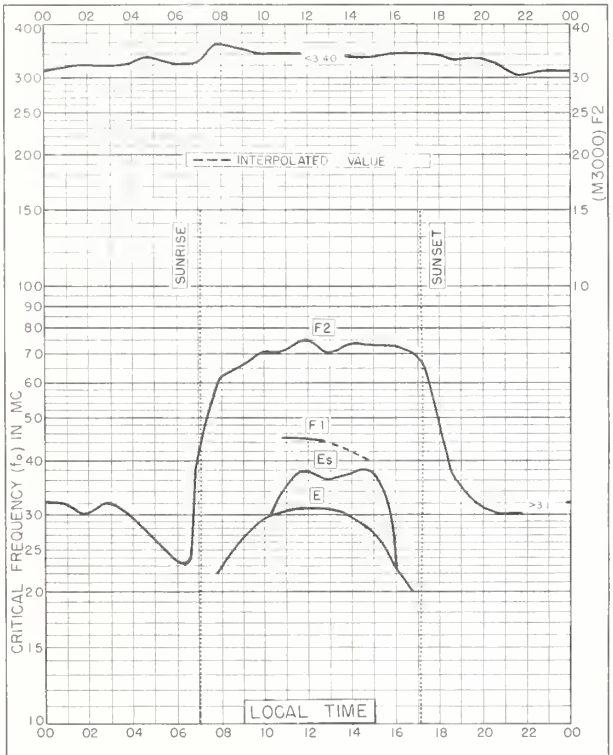


Fig. 44. MUNDARING, W. AUSTRALIA
32.0°S, 116.2°E JULY 1961

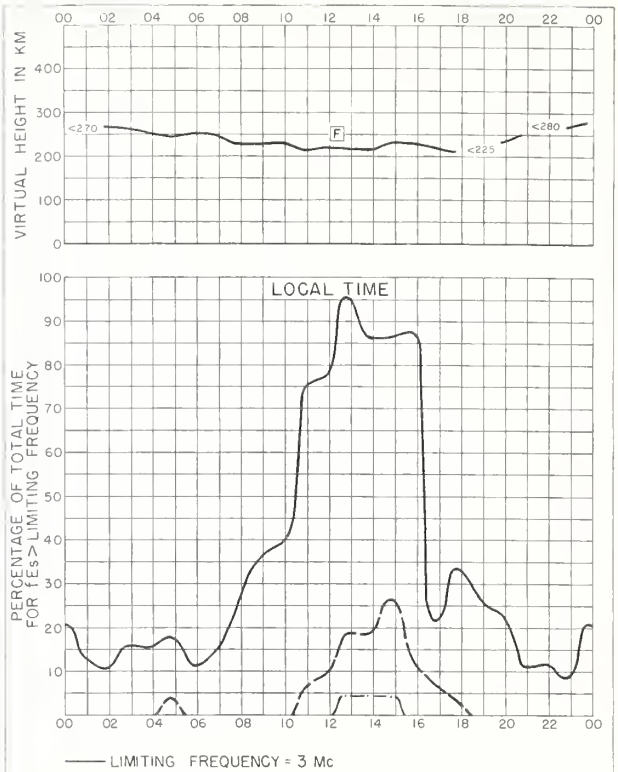


Fig. 45. MUNDARING, W. AUSTRALIA JULY 1961


Fig. 46. CANBERRA, AUSTRALIA
35.3°S, 149.0°E JULY 1961

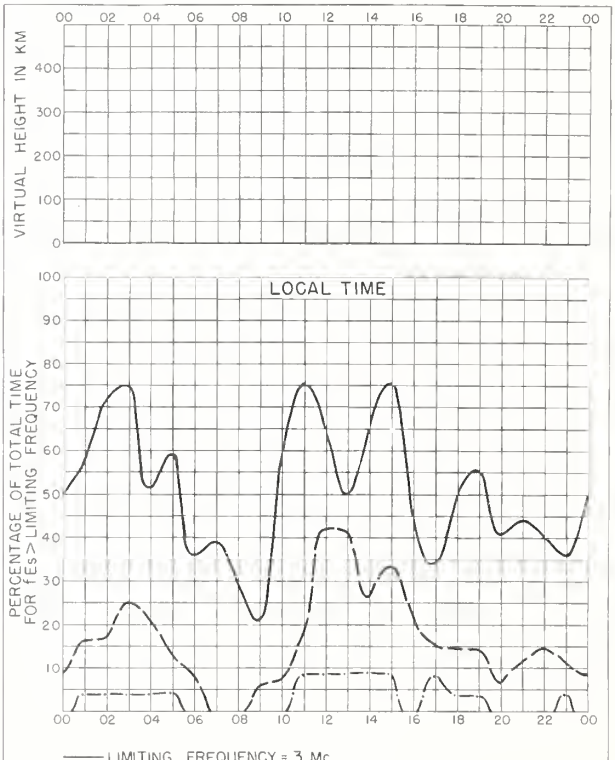


Fig. 47. CANBERRA, AUSTRALIA JULY 1961


Fig. 48. HOBART, TASMANIA
42.9°S, 147.2°E JULY 1961

NBS 503

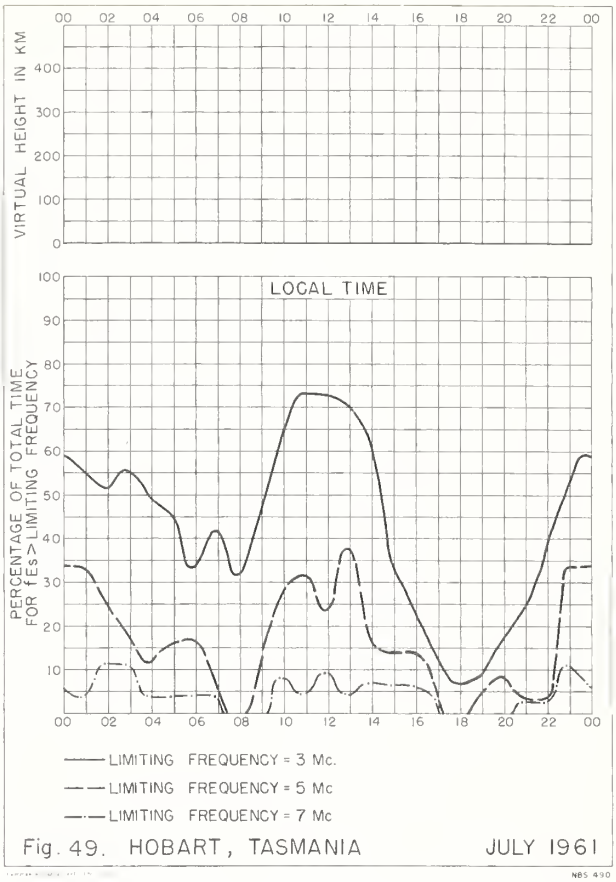


Fig. 49. HOBART, TASMANIA JULY 1961

NBS 490

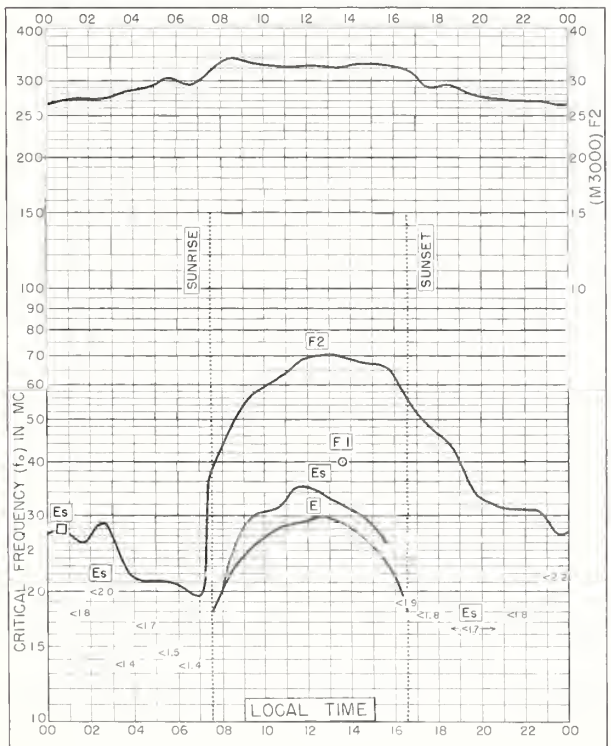


Fig. 50. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E JULY 1961

NBS 503

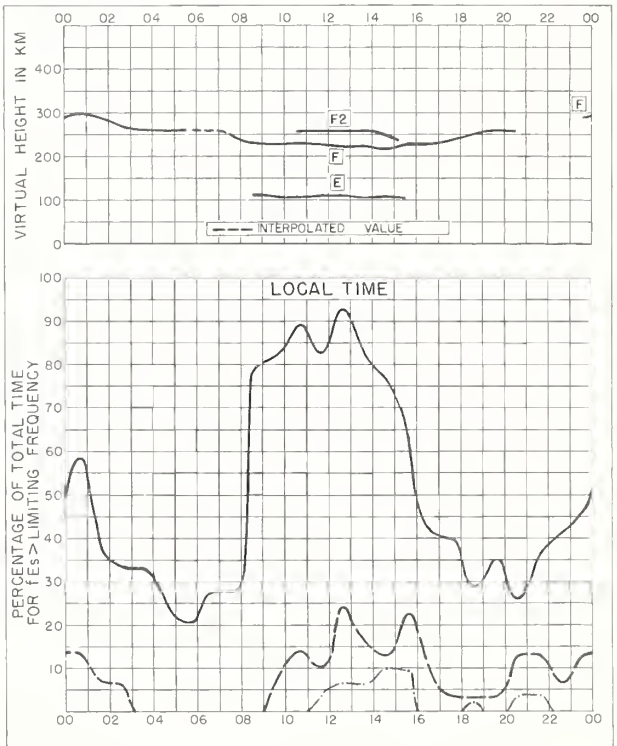


Fig. 51. CHRISTCHURCH, NEW ZEALAND JULY 1961

NBS 490

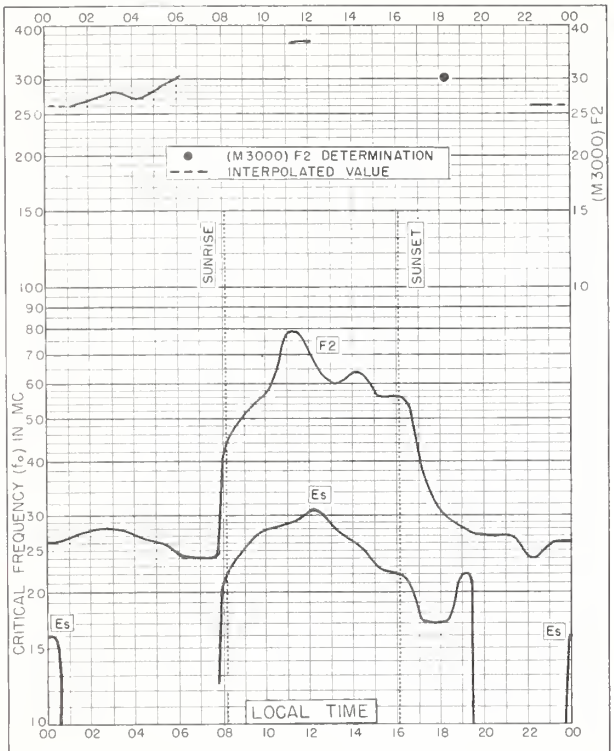


Fig. 52. FALKLAND IS.
51.7°S, 57.8°W JULY 1961

NBS 503

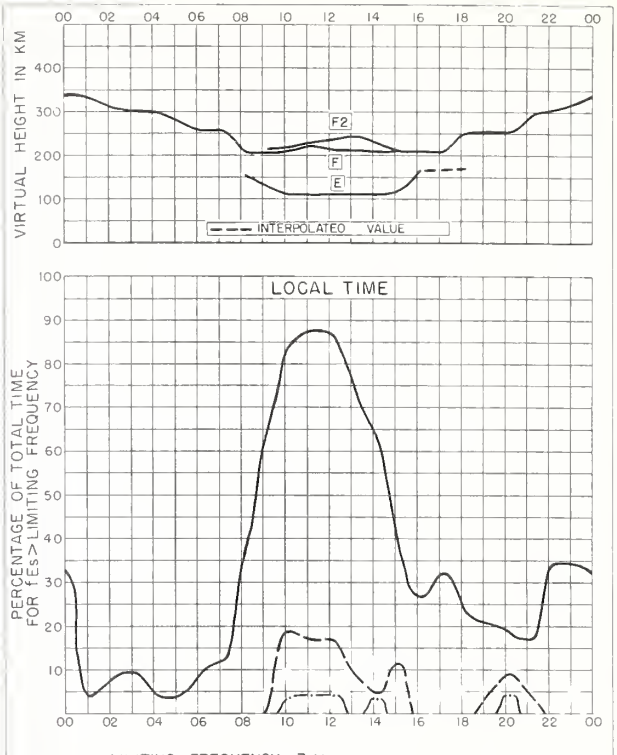


Fig. 53. FALKLAND IS. JULY 1961

NBS 490

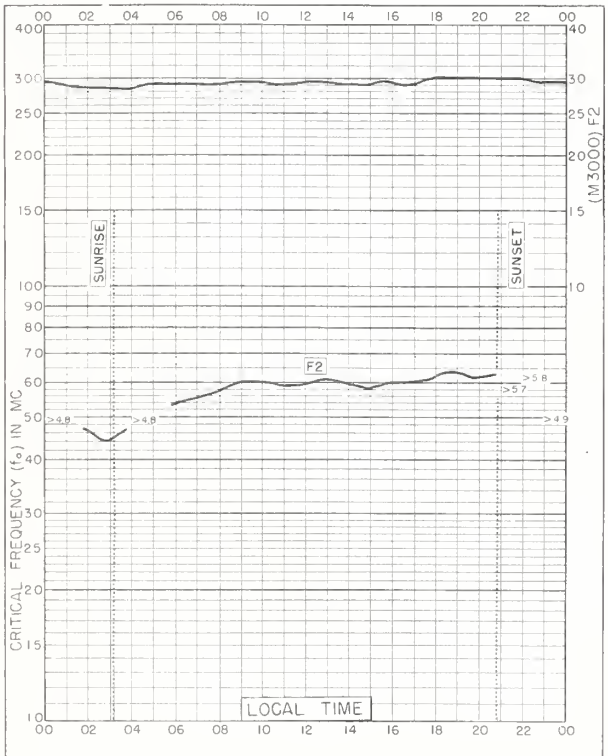


Fig. 54. INVERNESS, SCOTLAND
57.4°N, 4.2°W JUNE 1961

NBS 503

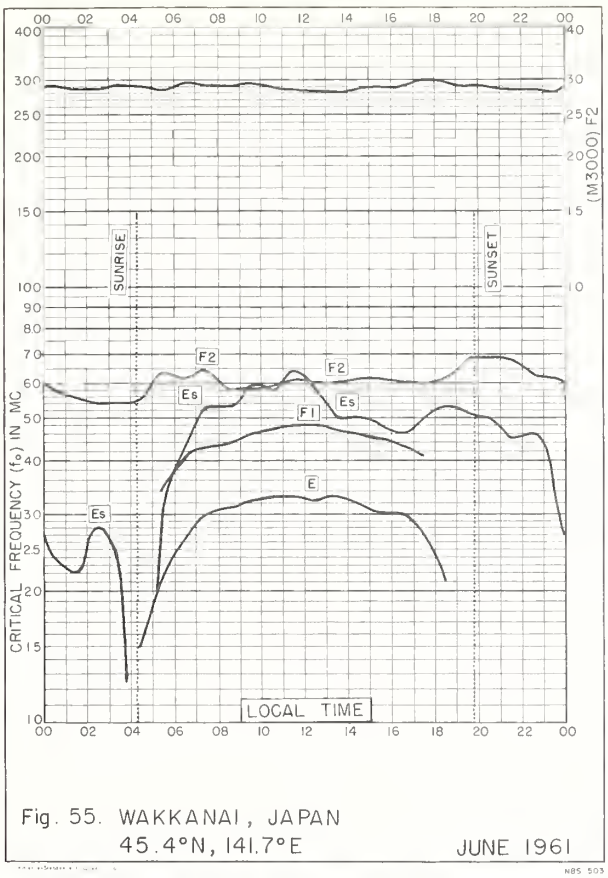


Fig. 55. WAKKANAI, JAPAN
45.4°N, 141.7°E JUNE 1961

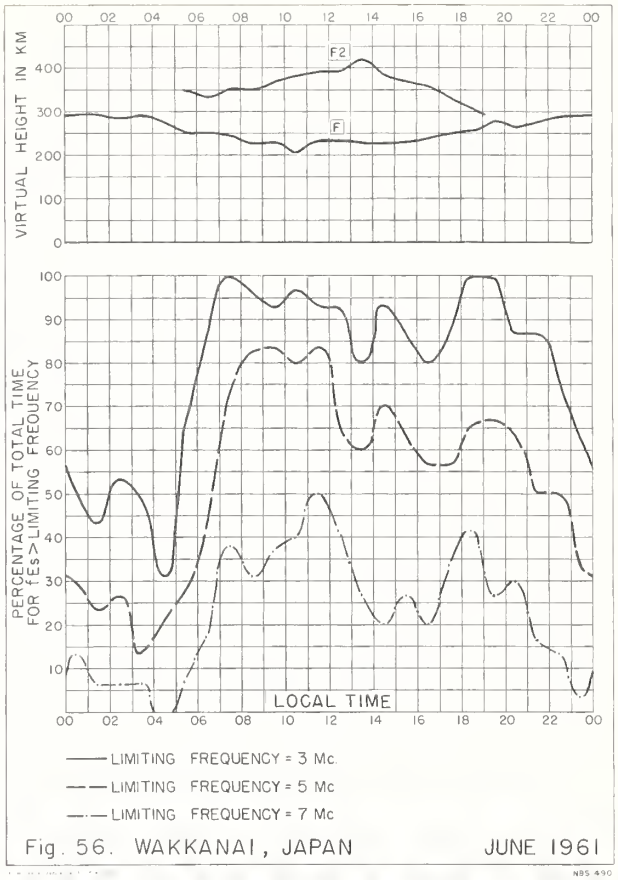


Fig. 56. WAKKANAI, JAPAN JUNE 1961

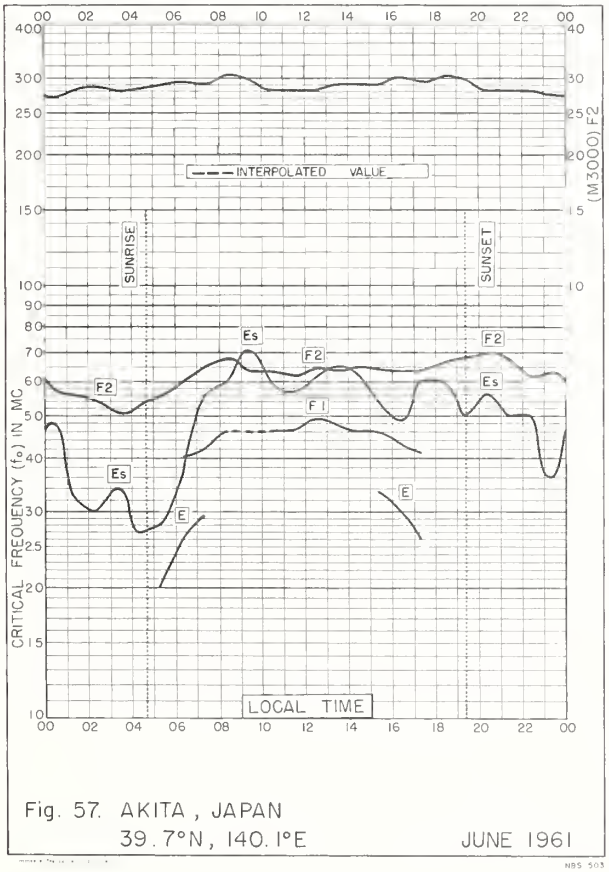


Fig. 57. AKITA, JAPAN
39.7°N, 140.1°E JUNE 1961

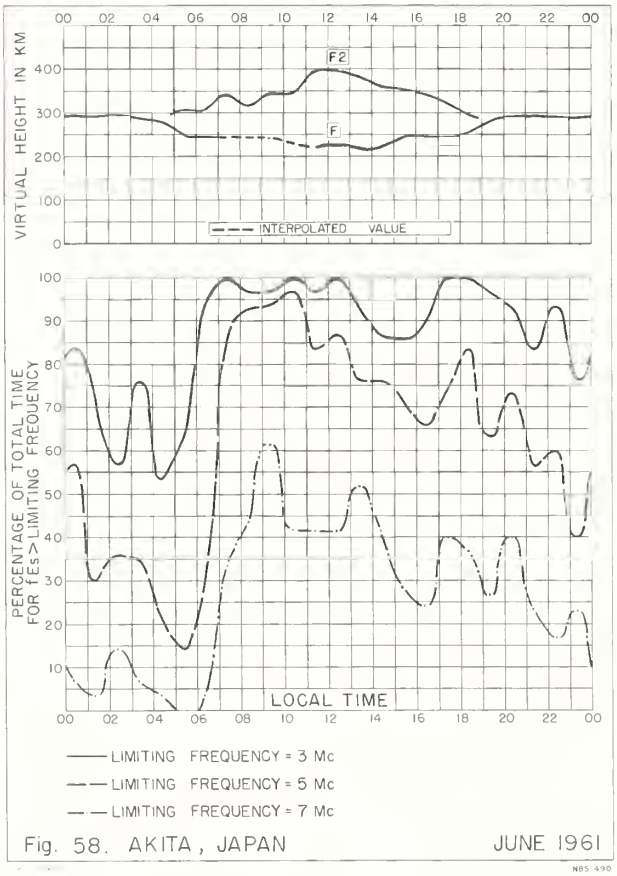


Fig. 58. AKITA, JAPAN JUNE 1961

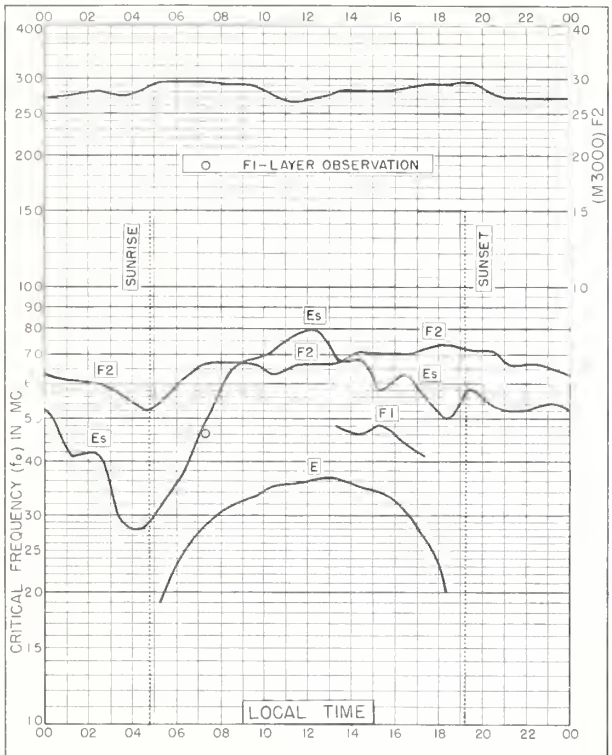


Fig. 59. TOKYO, JAPAN
35.7°N, 139.5°E JUNE 1961

NBS 503

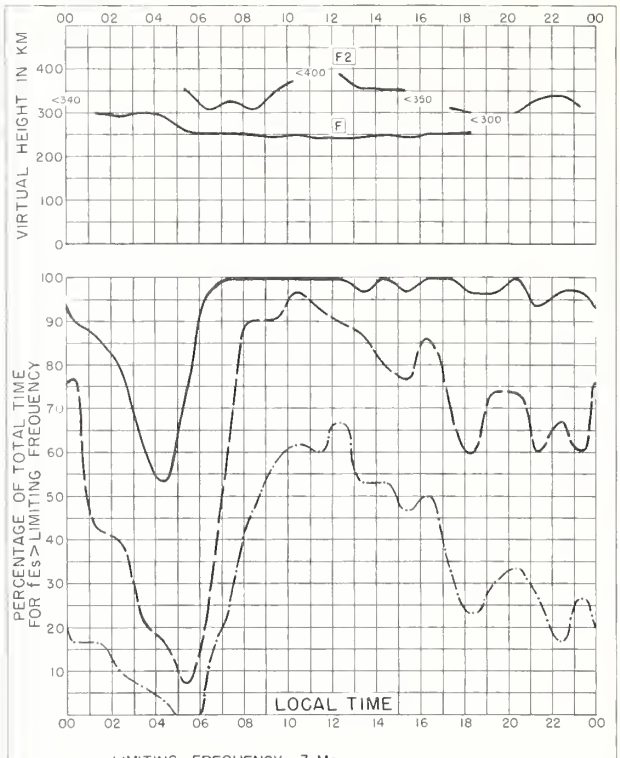


Fig. 60. TOKYO, JAPAN JUNE 1961

NBS 490

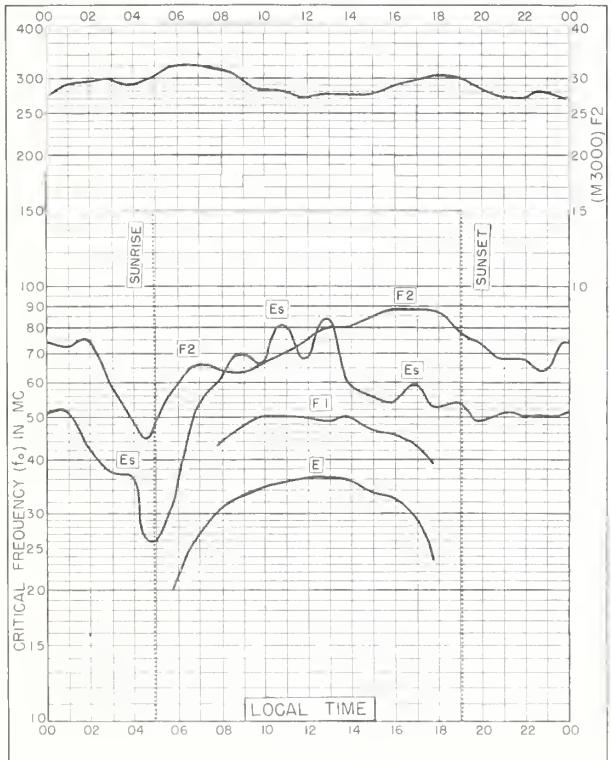


Fig. 61. YAMAGAWA, JAPAN
31.2°N, 130.6°E JUNE 1961

NBS 503

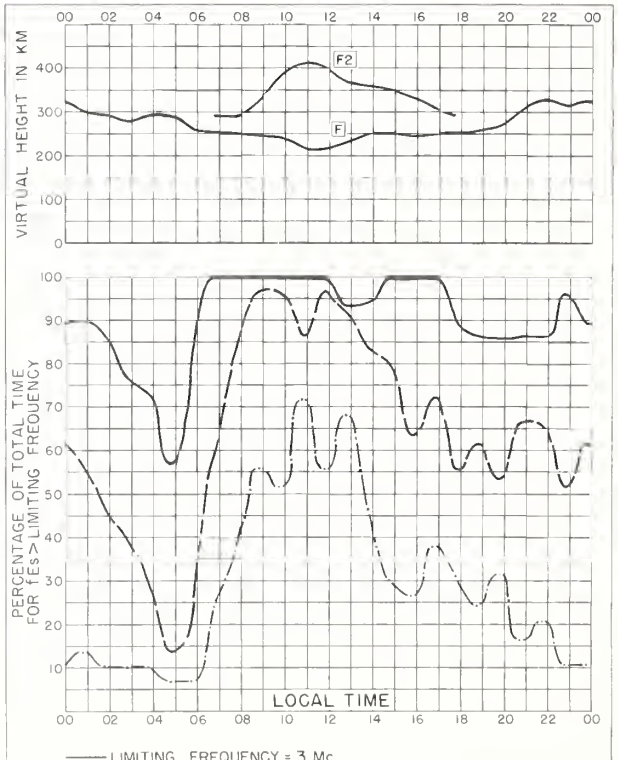


Fig. 62. YAMAGAWA, JAPAN JUNE 1961

NBS 490

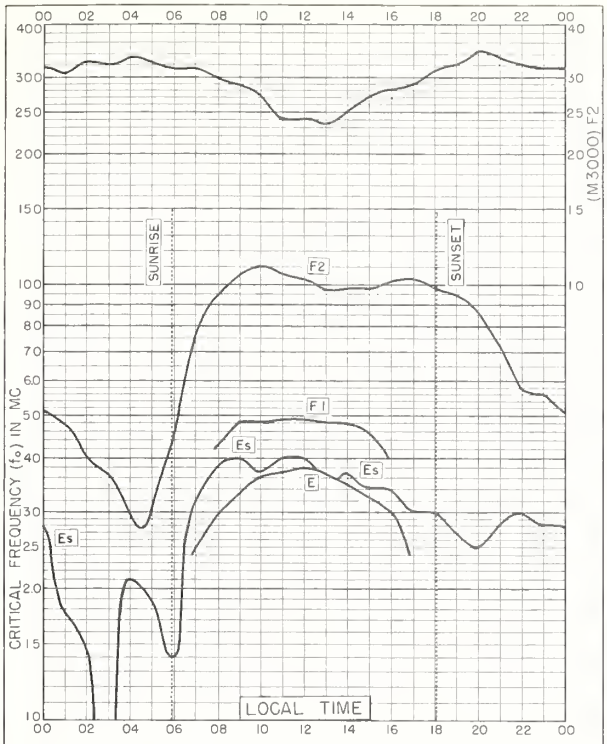


Fig. 63. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E JUNE 1961

NBS 503

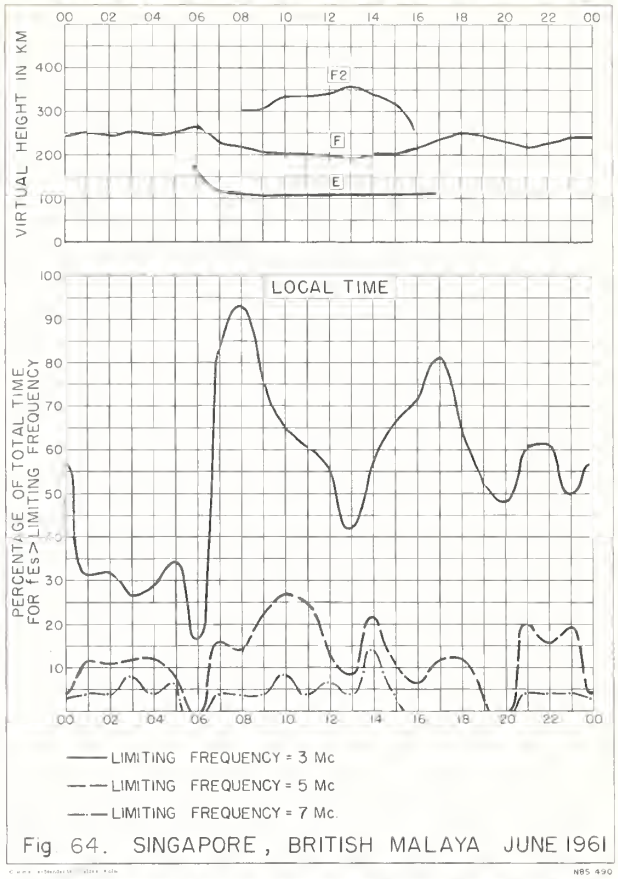


Fig. 64. SINGAPORE, BRITISH MALAYA JUNE 1961

NBS 490

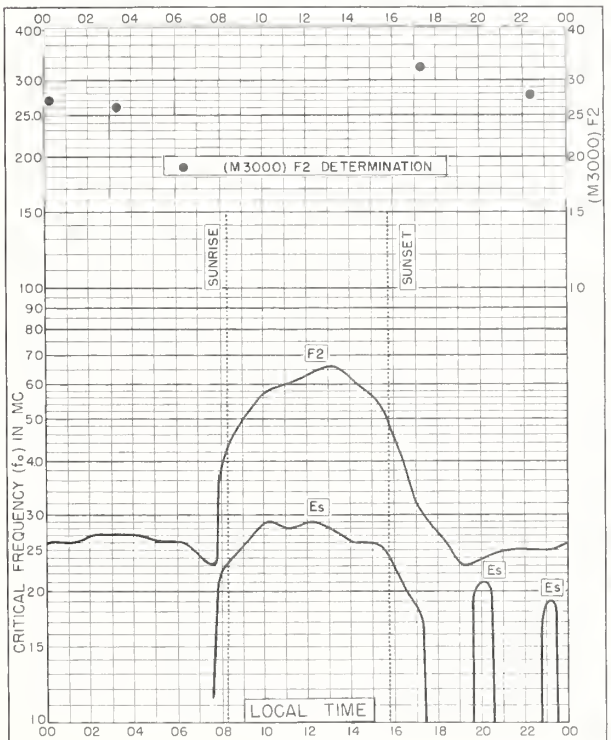


Fig. 65. FALKLAND IS.
51.7°S, 57.8°W JUNE 1961

NBS 503

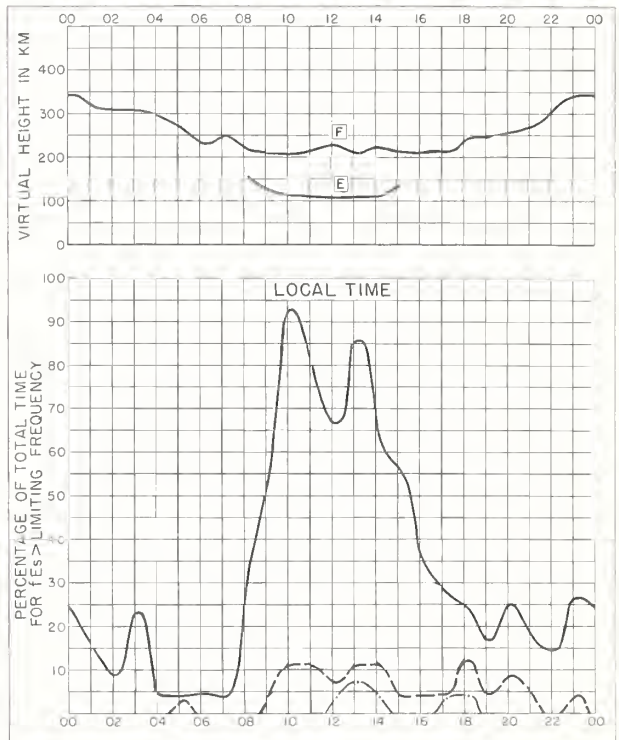


Fig. 66. FALKLAND IS. JUNE 1961

NBS 490

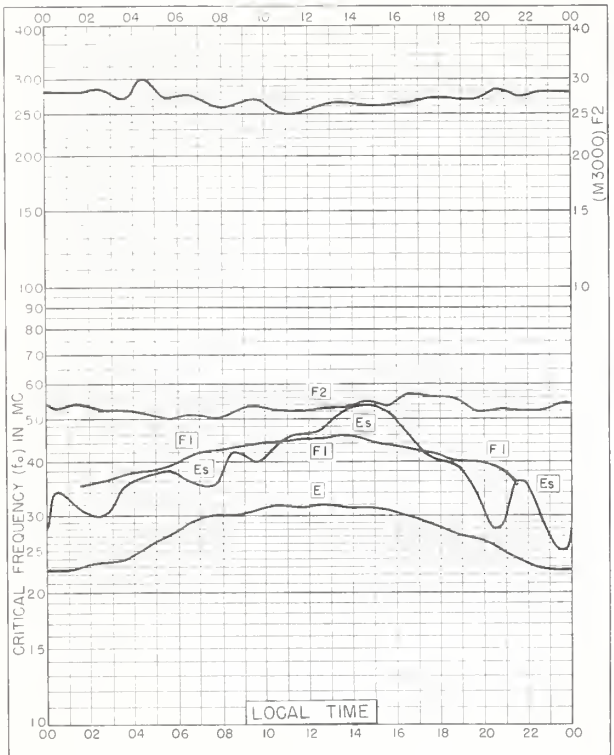


Fig. 67. THULE, GREENLAND
76.0°N, 68.0°W JULY 1960

NBS 503

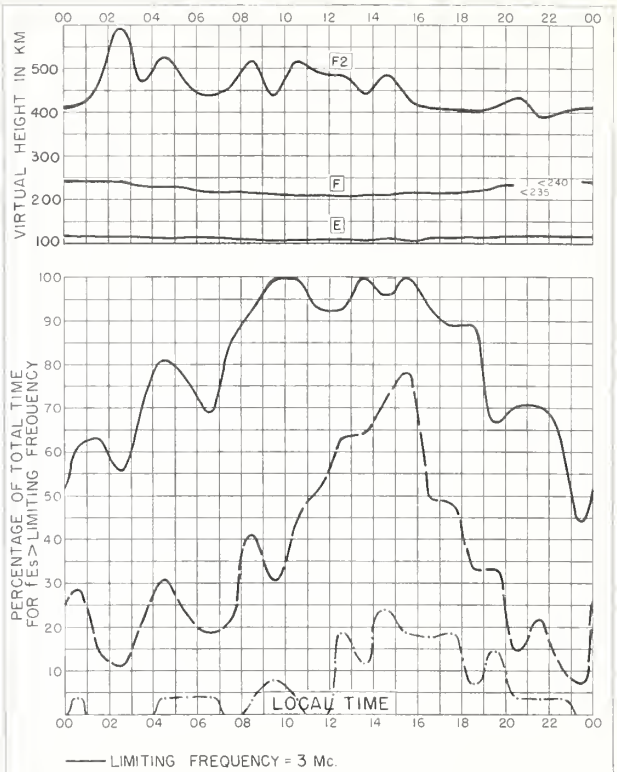


Fig. 68. THULE, GREENLAND JULY 1960

NBS 490


Fig. 69. POINT BARROW, ALASKA
71.3°N, 156.8°W JULY 1960

NBS 503

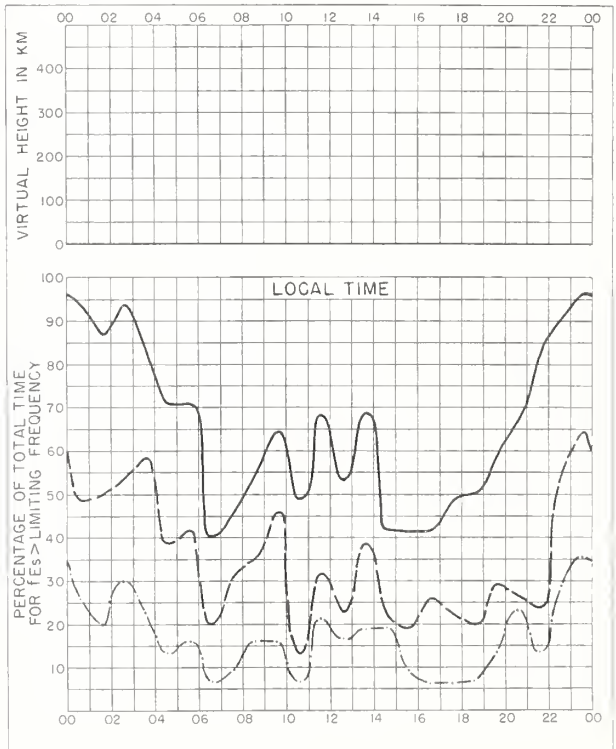


Fig. 70. POINT BARROW, ALASKA JULY 1960

NBS 490

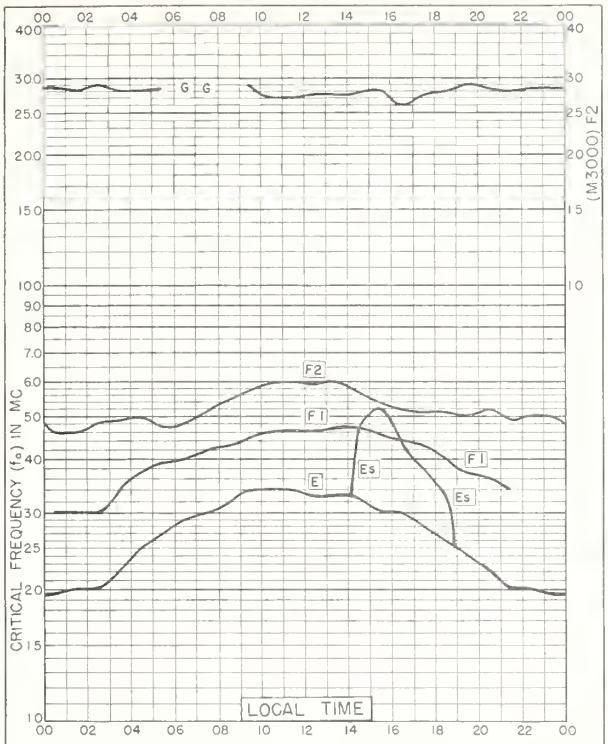


Fig. 71. GODHAVN, GREENLAND
69.3°N, 53.5° W JULY 1960

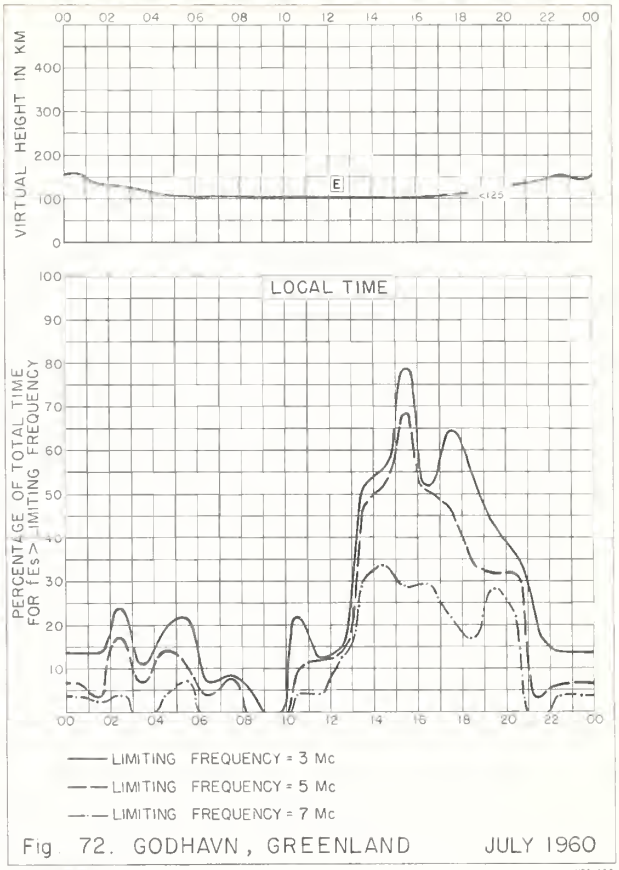


Fig. 72. GODHAVN, GREENLAND JULY 1960

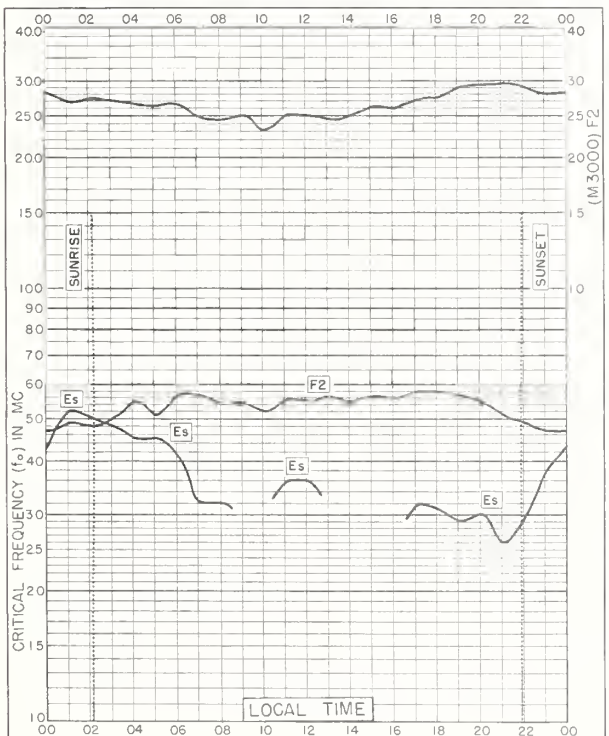


Fig. 73. FAIRBANKS, ALASKA
64.9°N, 147.8°W JULY 1960

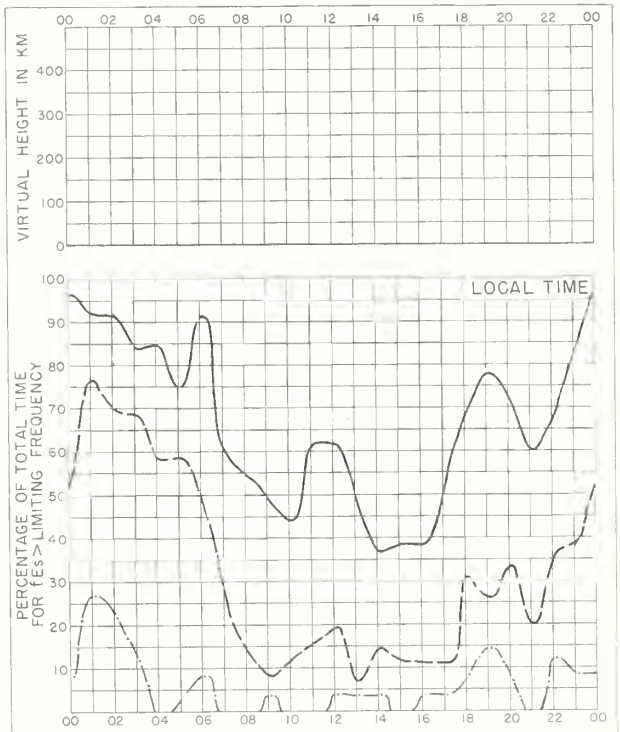


Fig. 74. FAIRBANKS, ALASKA JULY 1960

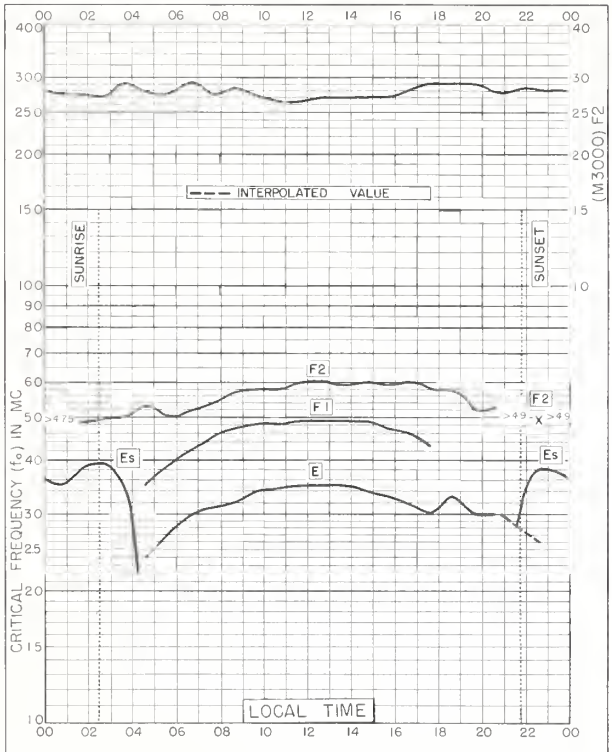


Fig. 75. REYKJAVIK, ICELAND
64.1°N, 21.8°W JULY 1960

NBS 503

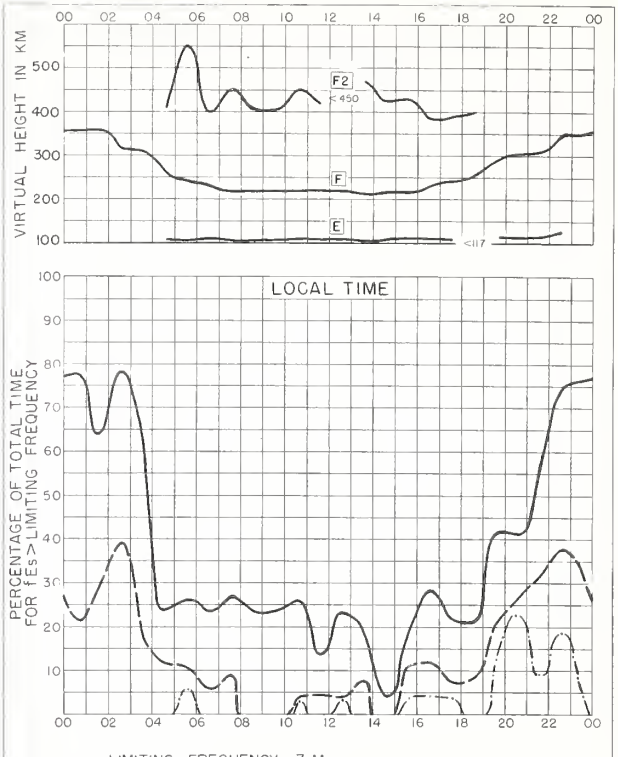


Fig. 76. REYKJAVIK, ICELAND JULY 1960

NBS 490

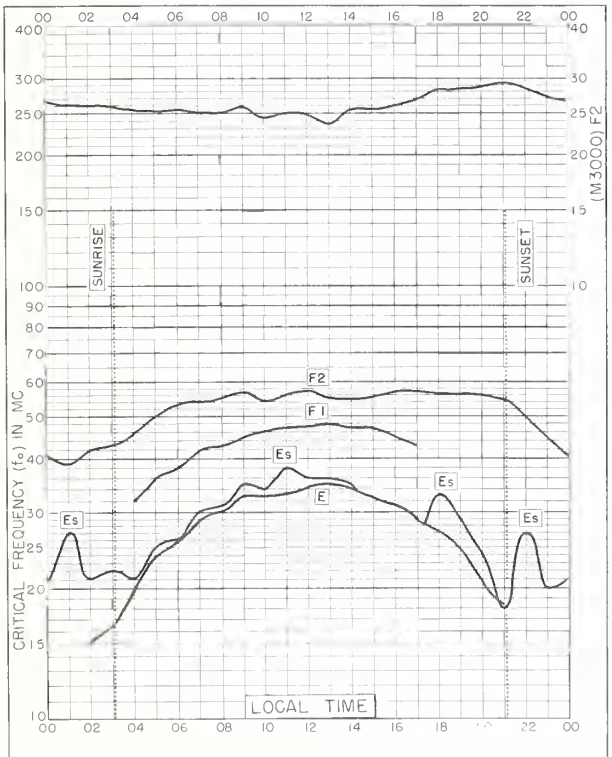


Fig. 77. ANCHORAGE, ALASKA
61.2°N, 149.9°W JULY 1960

NBS 503

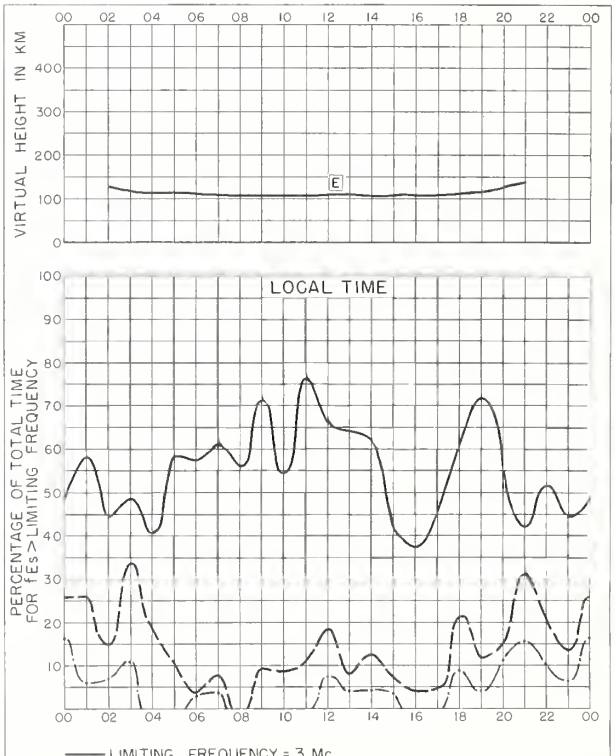


Fig. 78. ANCHORAGE, ALASKA JULY 1960

NBS 490

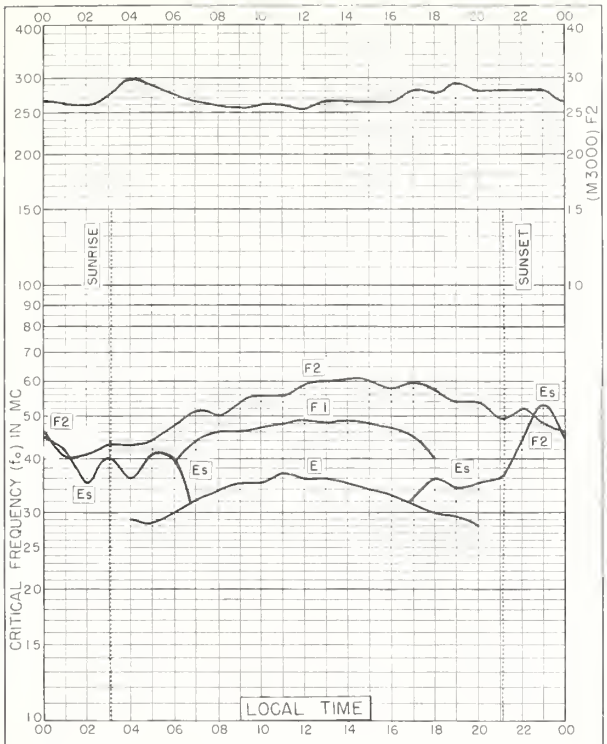


Fig. 79. NARSSARSSUAQ, GREENLAND
61.2°N, 45.4°W JULY 1960

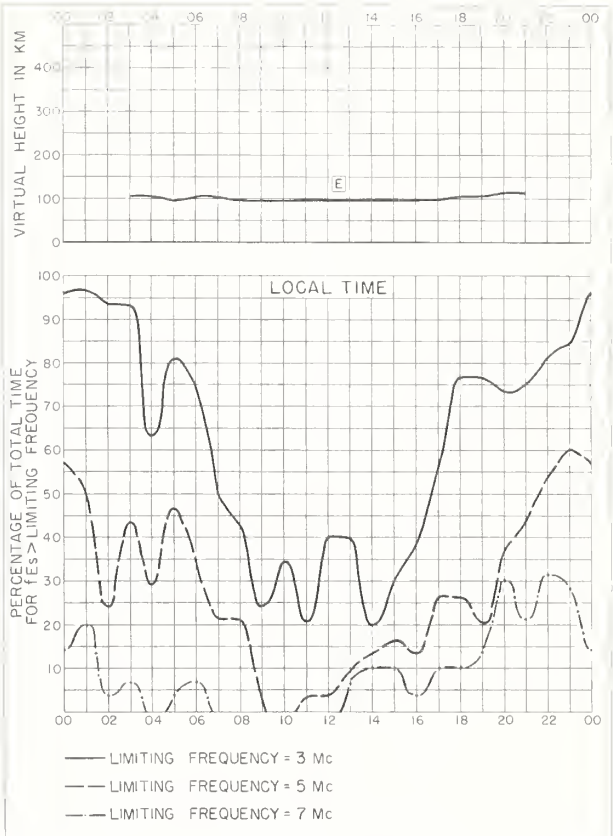


Fig. 80. NARSSARSSUAQ, GREENLAND JULY 1960

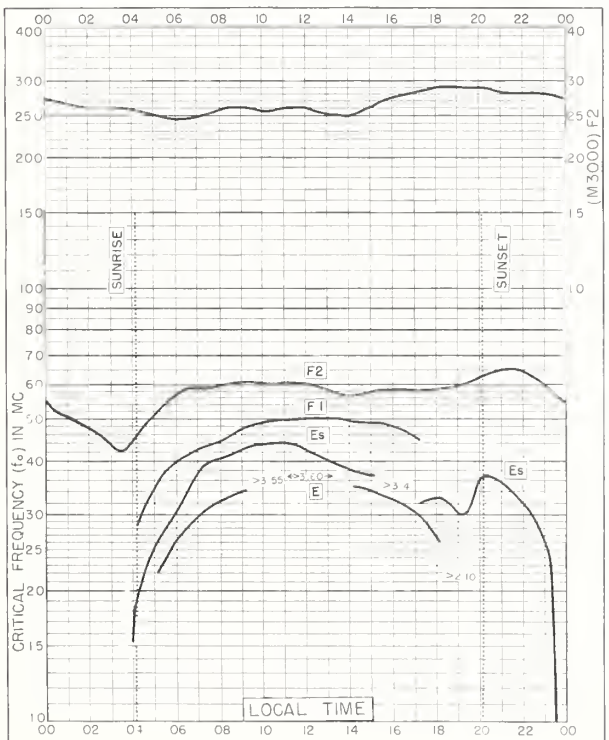


Fig. 81. ADAK, ALASKA
51.9°N, 176.6°W JULY 1960

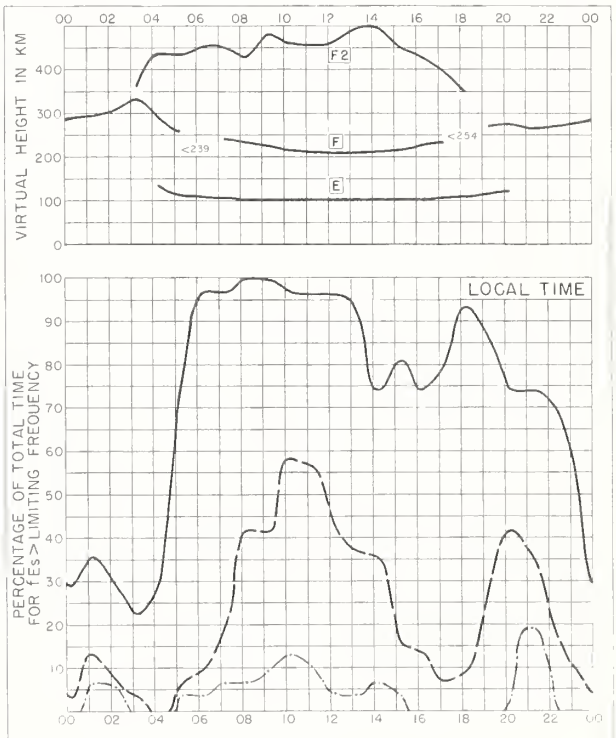


Fig. 82. ADAK, ALASKA JULY 1960

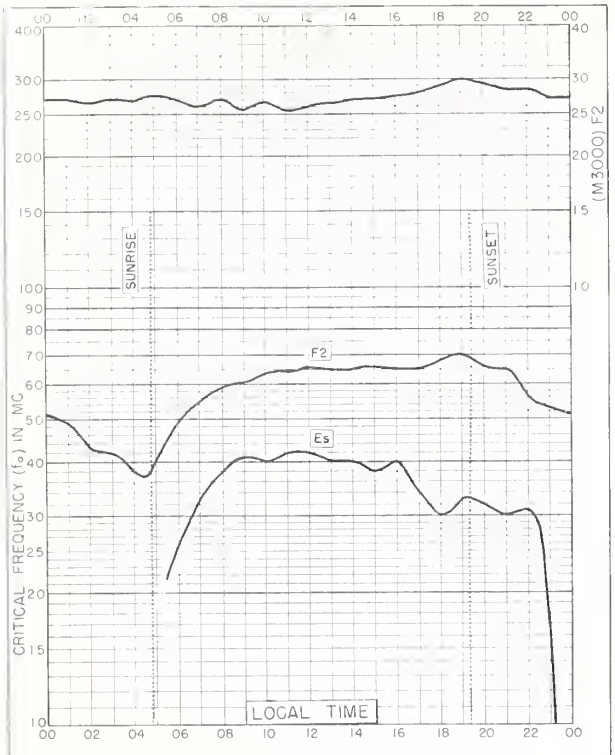


Fig. 83. BOULDER, COLORADO
40.0°N, 105.3°W JULY 1960

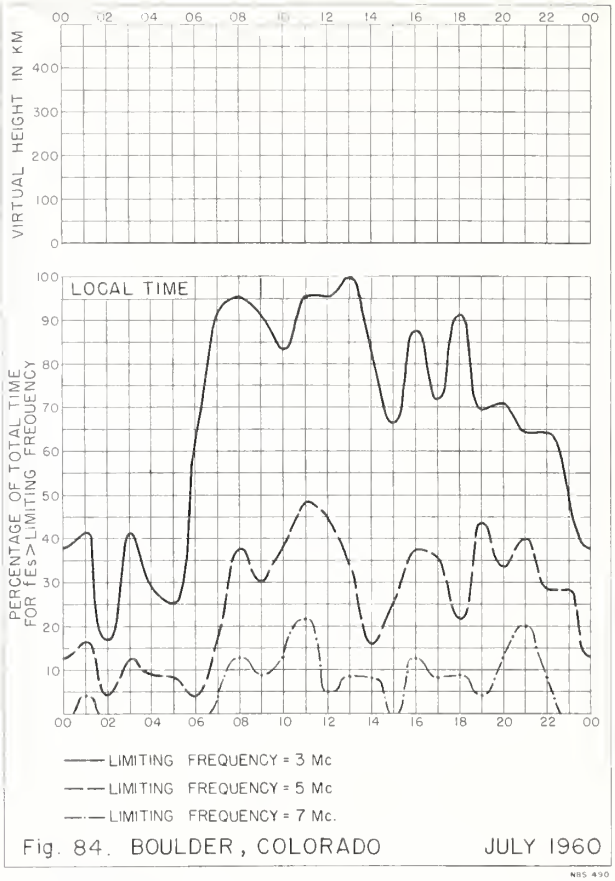


Fig. 84. BOULDER, COLORADO JULY 1960

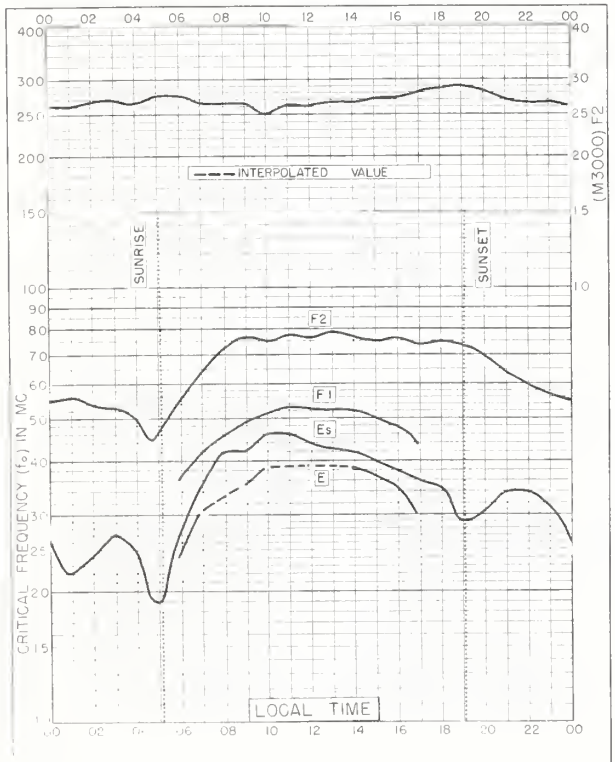


Fig. 85. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W JULY 1960

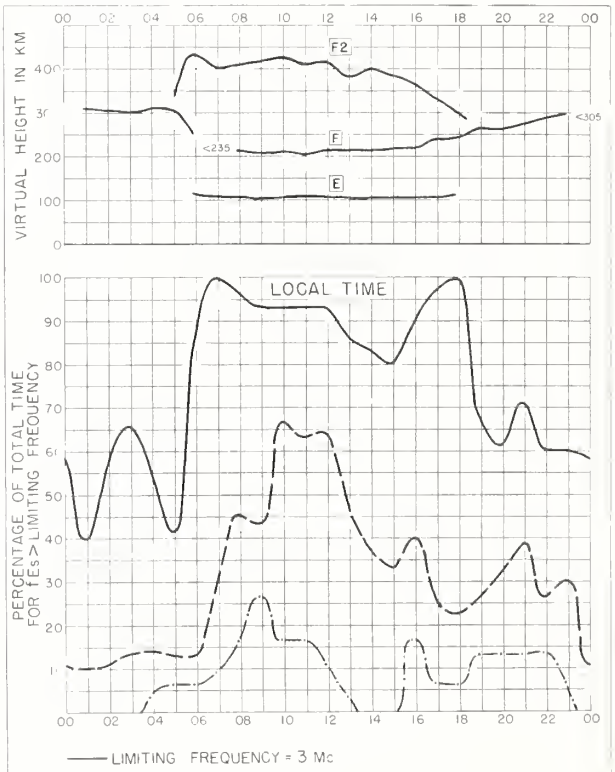


Fig. 86. WHITE SANDS, NEW MEXICO JULY 1960

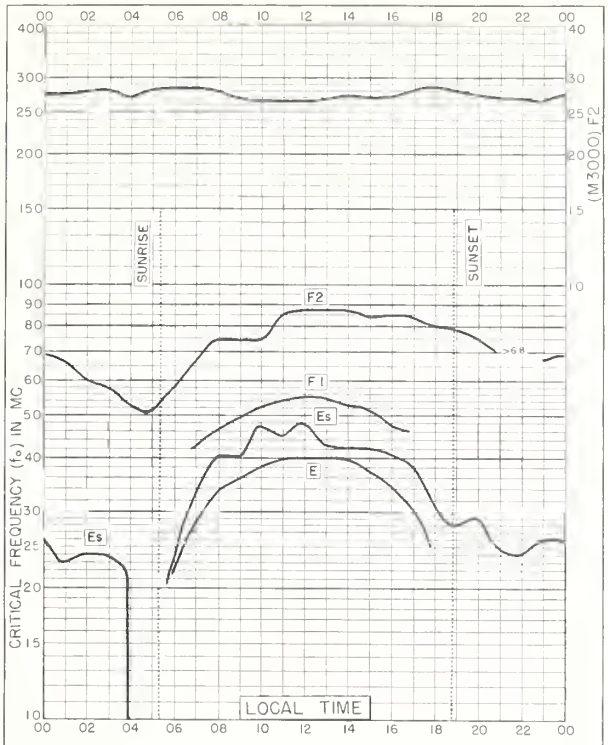


Fig. 87. GRAND BAHAMA I.
26.6°N, 78.2°W JULY 1960

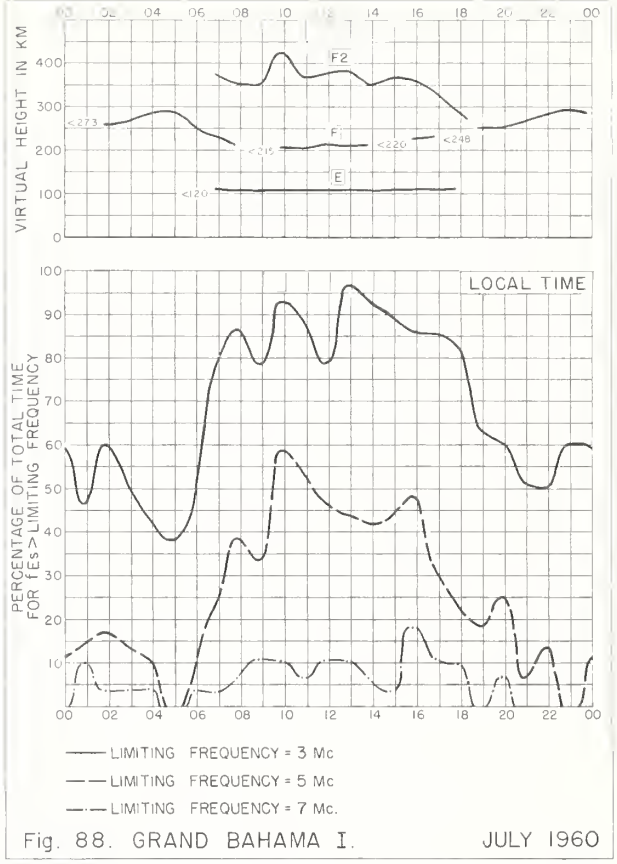


Fig. 88. GRAND BAHAMA I. JULY 1960

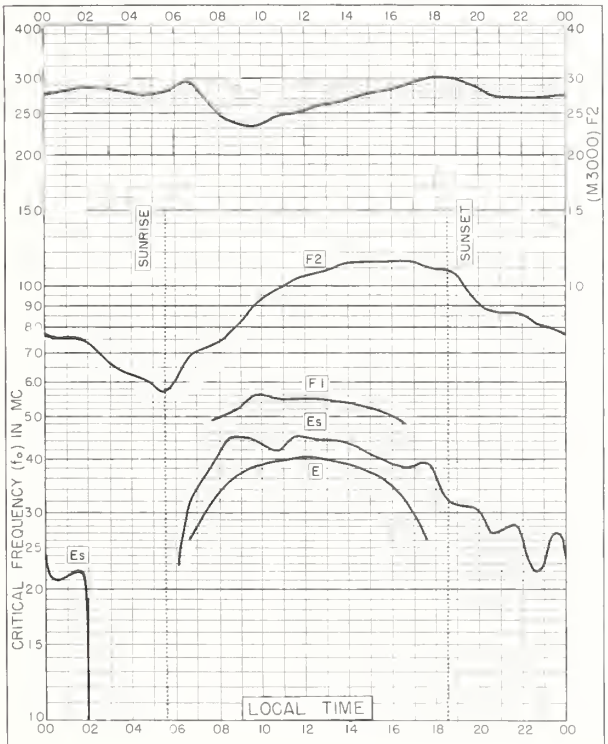


Fig. 89. MAUI, HAWAII
20.8°N, 156.5°W JULY 1960

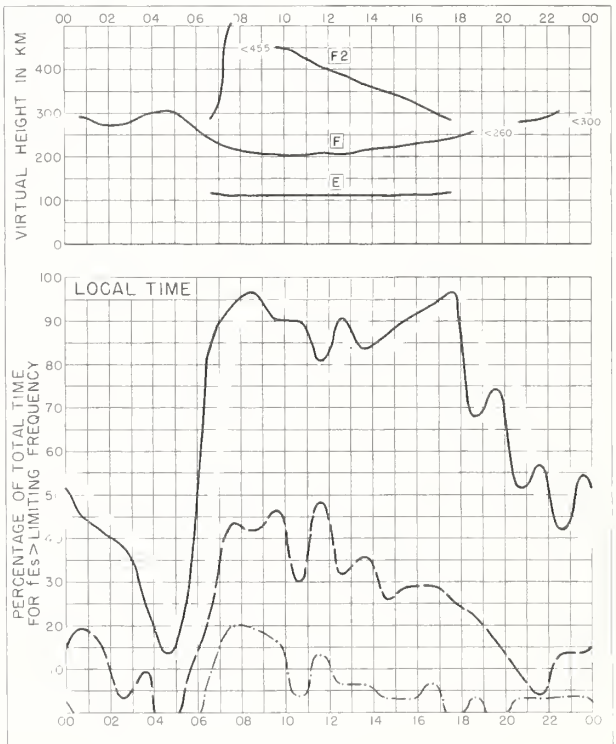


Fig. 90. MAUI, HAWAII JULY 1960

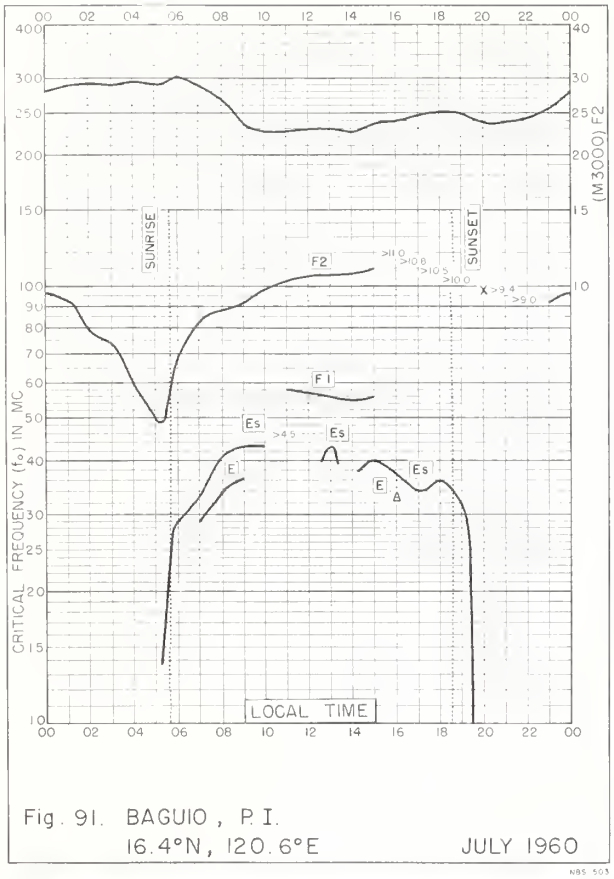


Fig. 91. BAGUIO, P. I.
16.4°N, 120.6°E JULY 1960

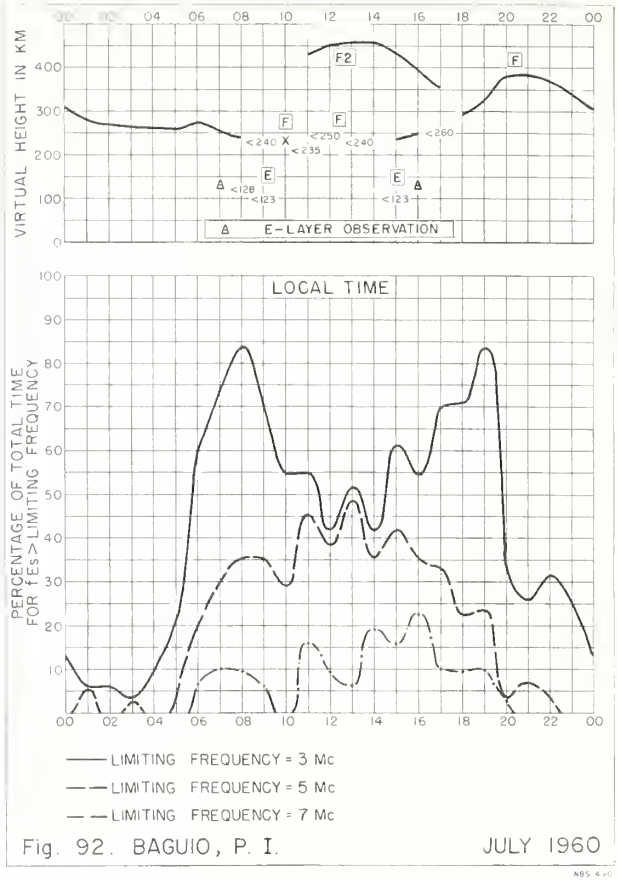


Fig. 92. BAGUIO, P. I. JULY 1960


Fig 93. La PAZ, BOLIVIA
16.5°S, 68.1°W JULY 1960

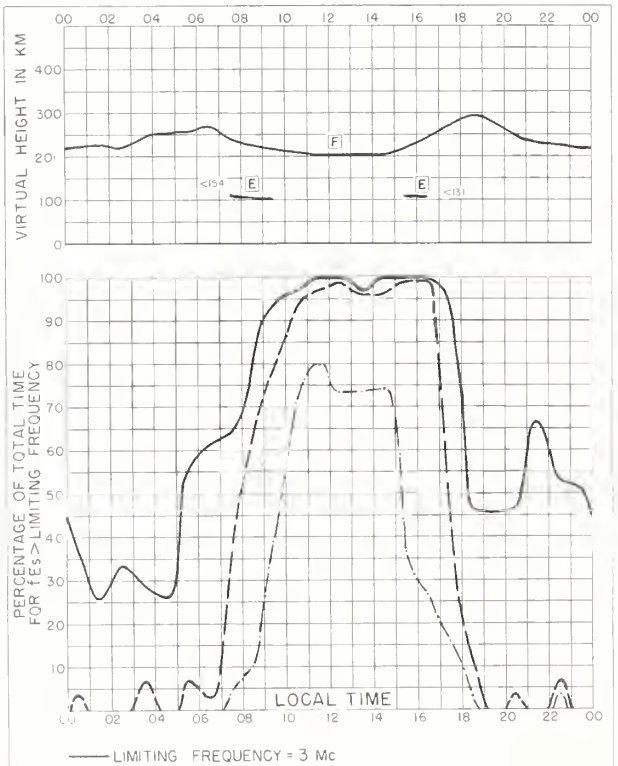


Fig. 94. La PAZ, BOLIVIA JULY 1960

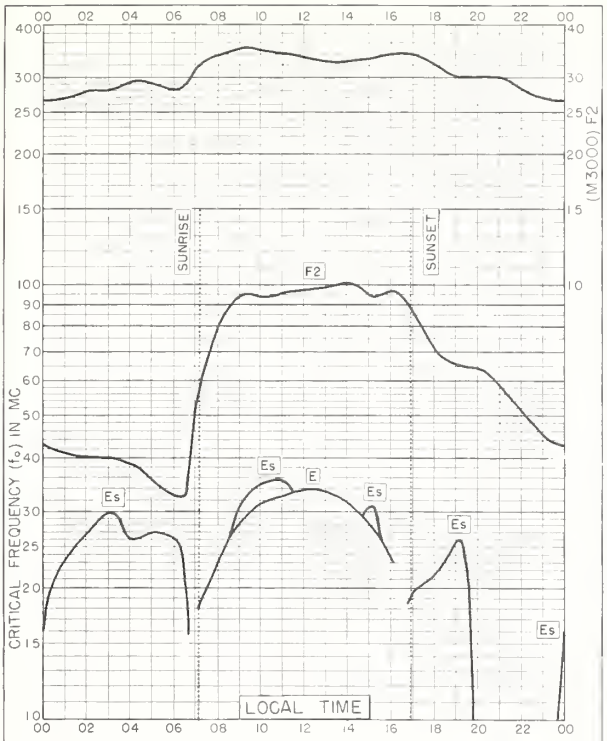


Fig. 95. CONCEPCION, CHILE
36.6°S, 73.0°W JULY 1960

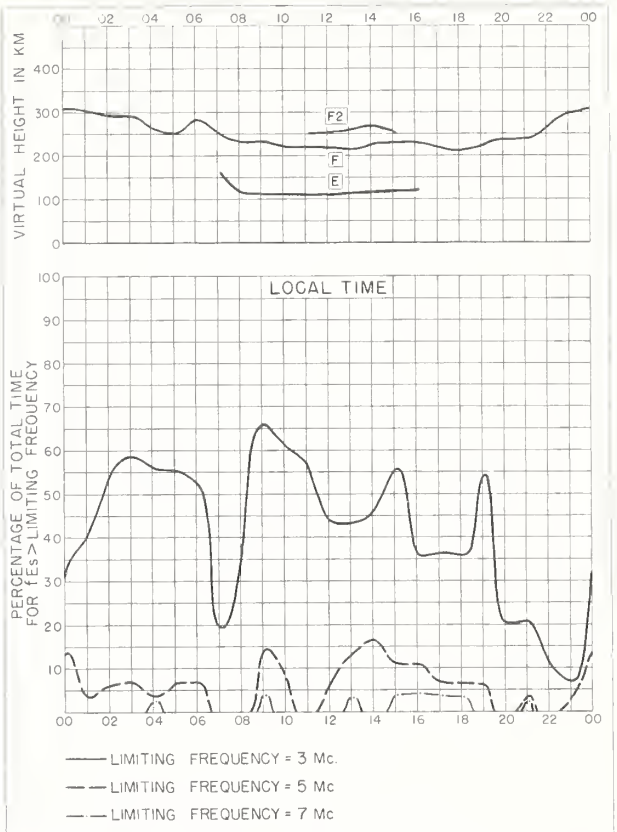


Fig. 96. CONCEPCION, CHILE JULY 1960


Fig. 97. BYRD STATION
80.0°S, 120.0° W JULY 1960

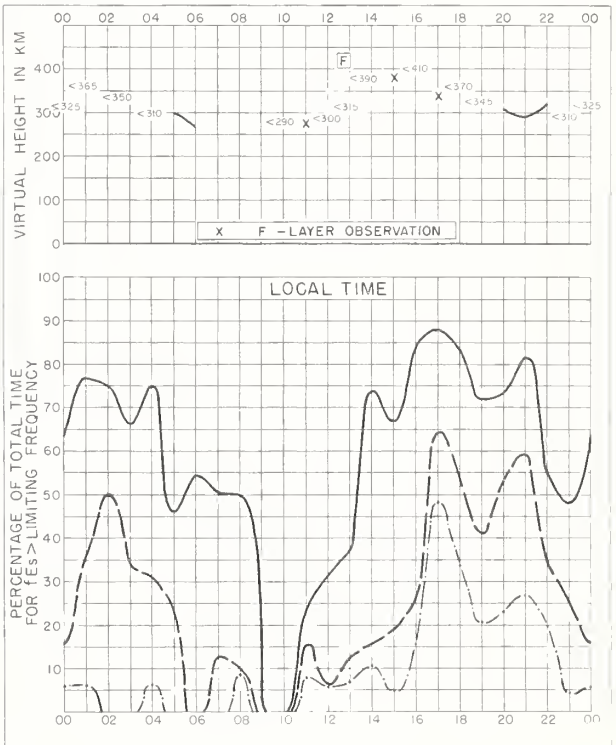


Fig. 98. BYRD STATION JULY 1960

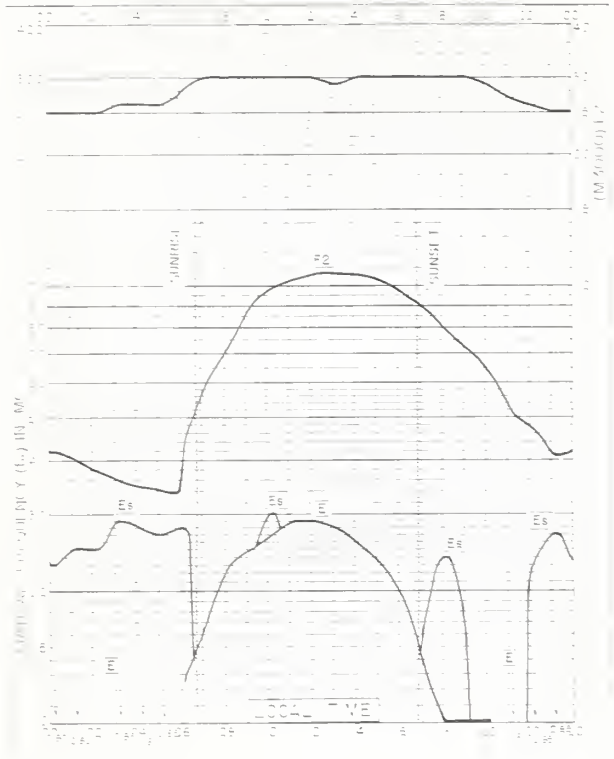


Fig 99 UPSALA, SWEDEN
59.8°N, 18°E OCTOBER 1959

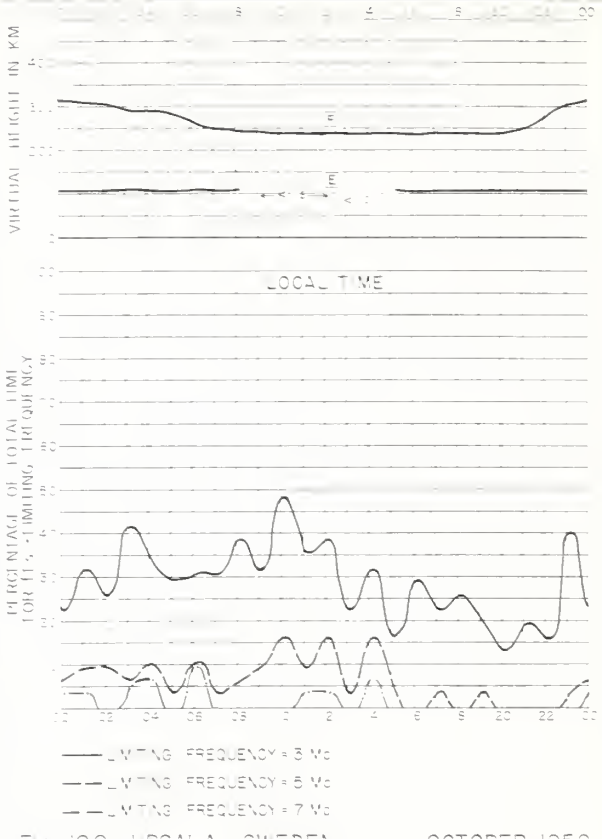


Fig 100. UPSALA, SWEDEN OCTOBER 1959

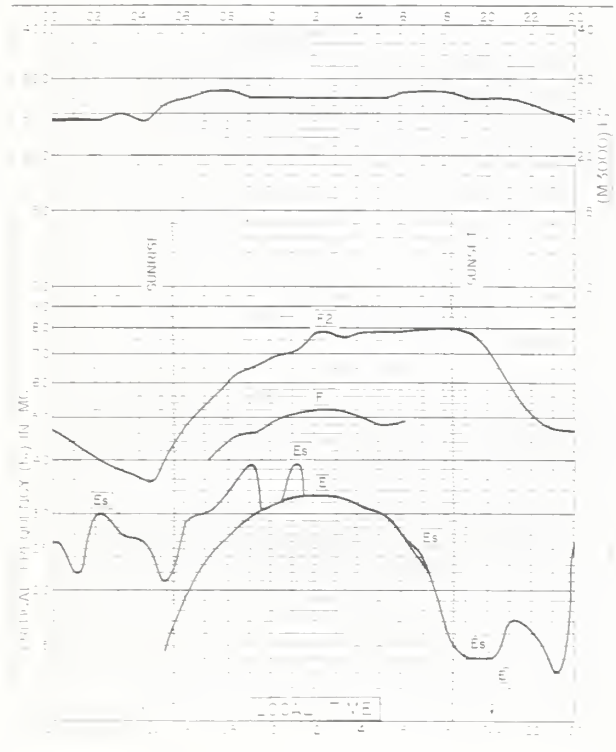


Fig 101 UPSALA, SWEDEN
59.8°N, 18°E SEPTEMBER 1959

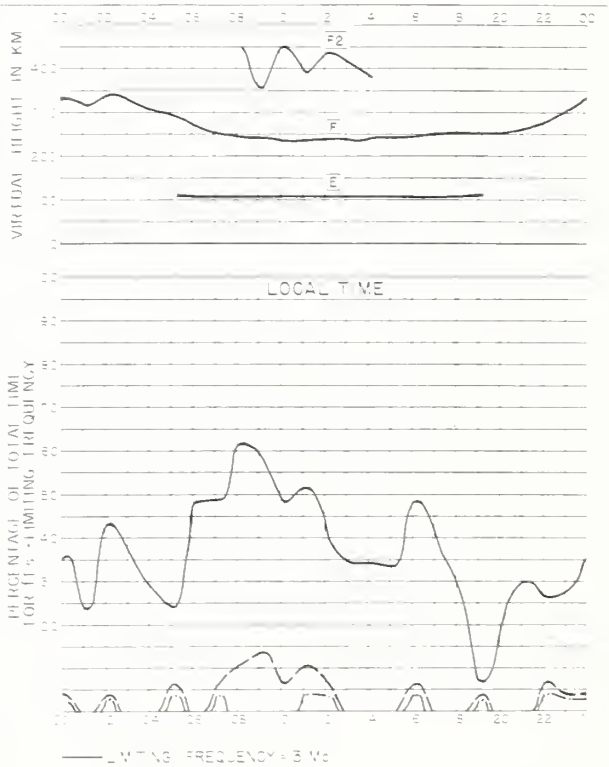


Fig 102. UPSALA, SWEDEN SEPTEMBER 1959

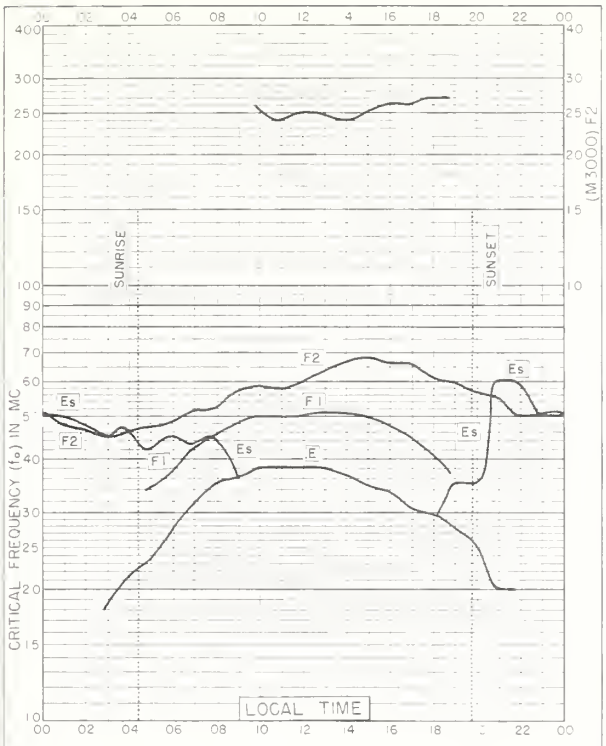


Fig. 103. CHURCHILL, CANADA
58.8°N, 94.2°W AUGUST 1959

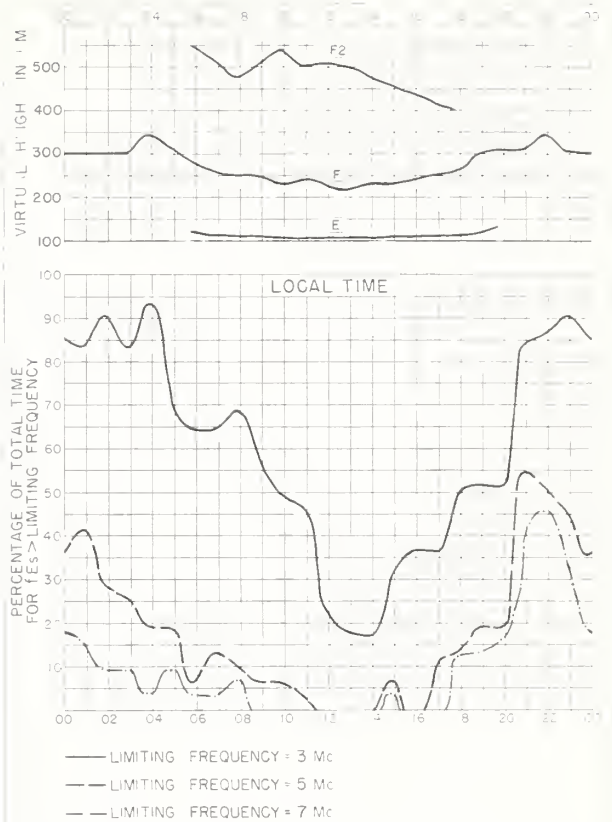


Fig. 104. CHURCHILL, CANADA AUGUST 1959

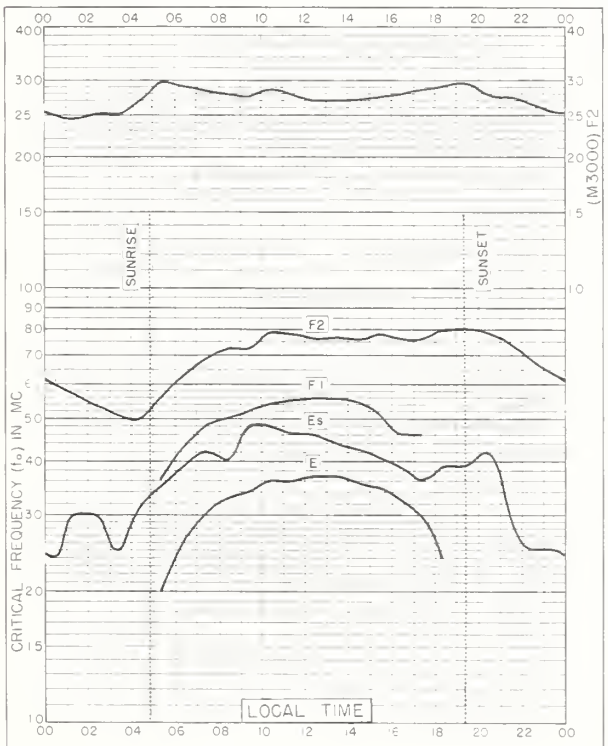


Fig. 105. De BILT, HOLLAND
52.1°N, 5.2°E AUGUST 1959

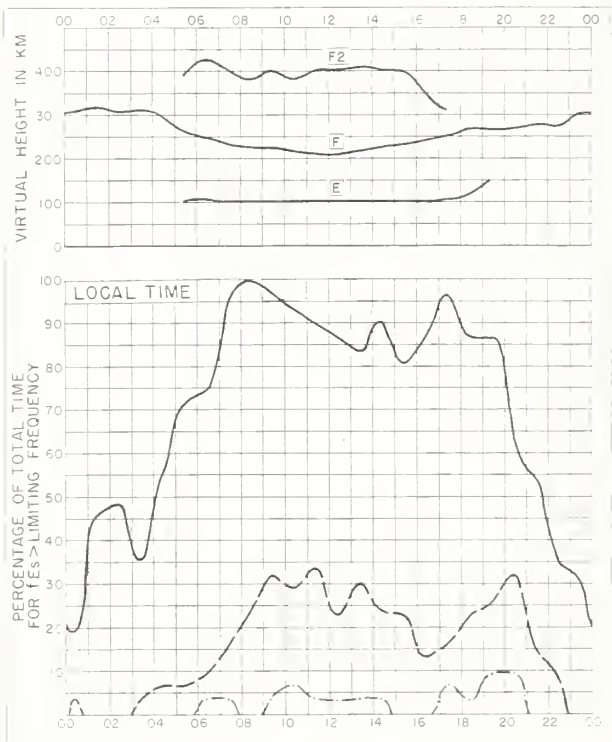


Fig. 106. De BILT, HOLLAND AUGUST 1959

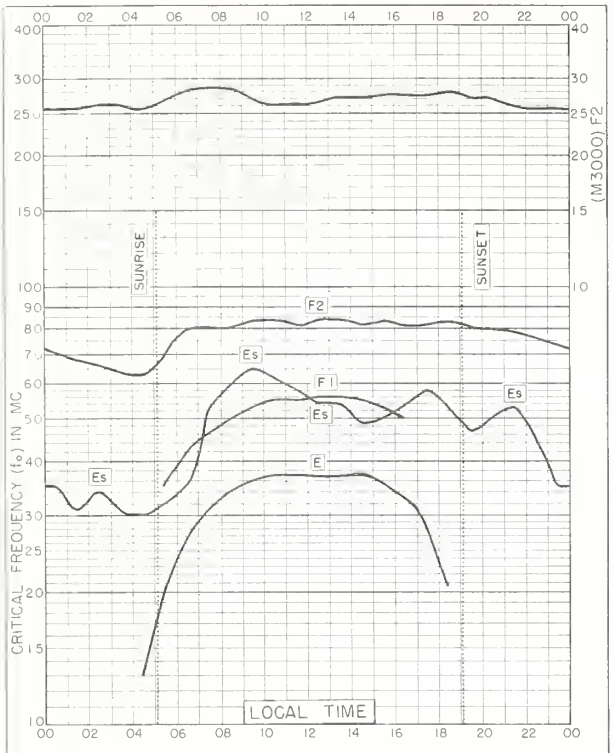


Fig. 107. WAKKANAI, JAPAN
45.4°N, 141.7°E AUGUST 1959

NBS 503

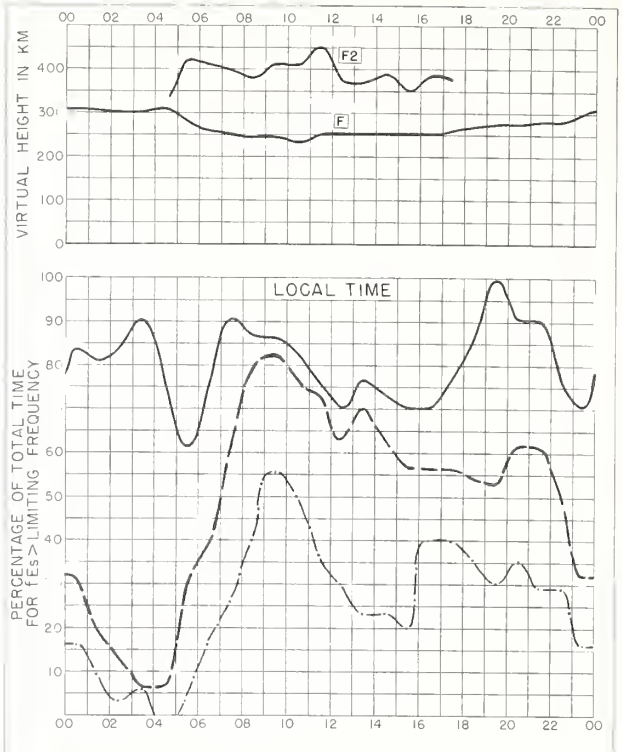


Fig. 108. WAKKANAI, JAPAN AUGUST 1959

NBS 490

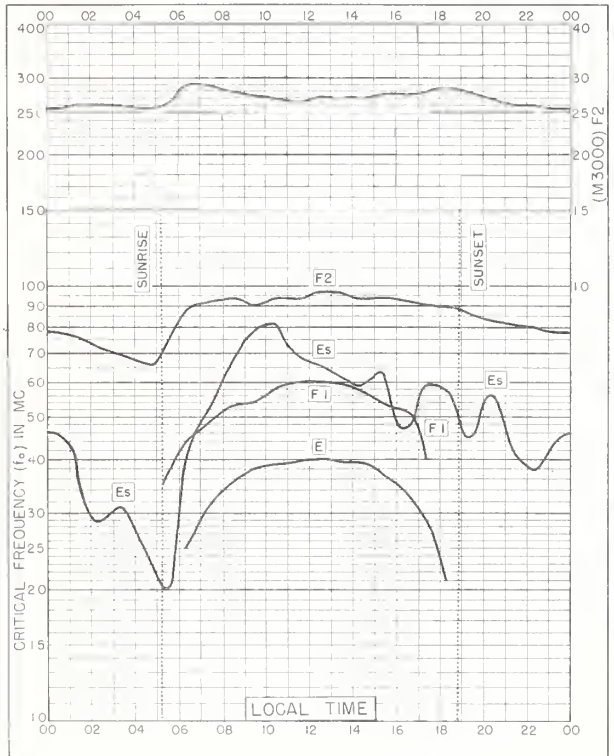


Fig. 109. AKITA, JAPAN
39.7°N, 140.1°E AUGUST 1959

NBS 503

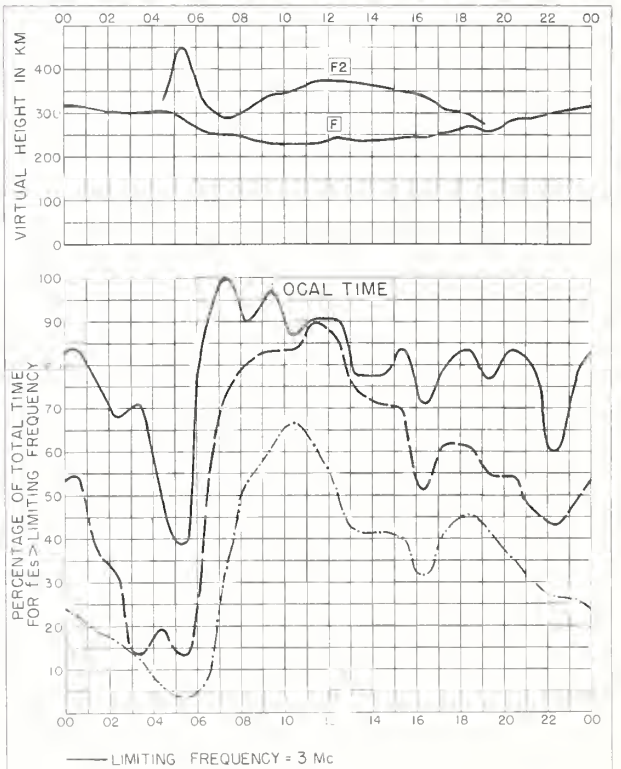


Fig. 110. AKITA, JAPAN AUGUST 1959

NBS 490

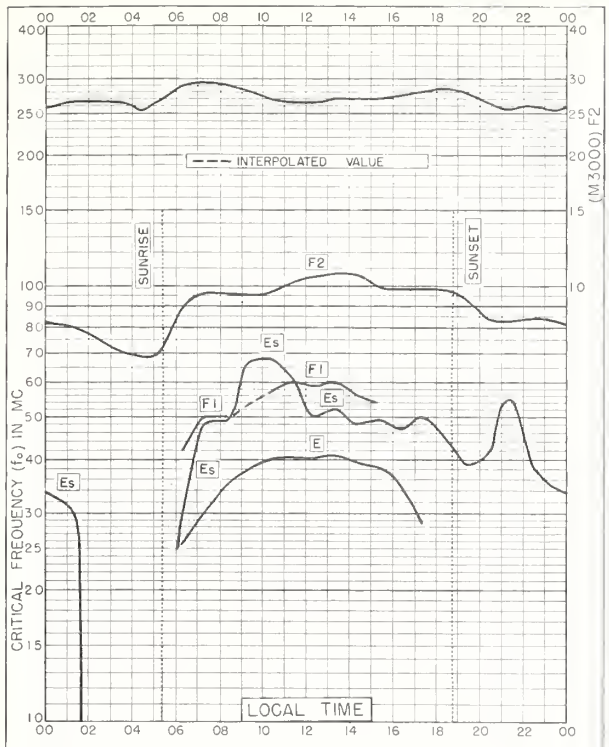


Fig. 111. TOKYO, JAPAN
35.7°N, 139.5°E AUGUST 1959

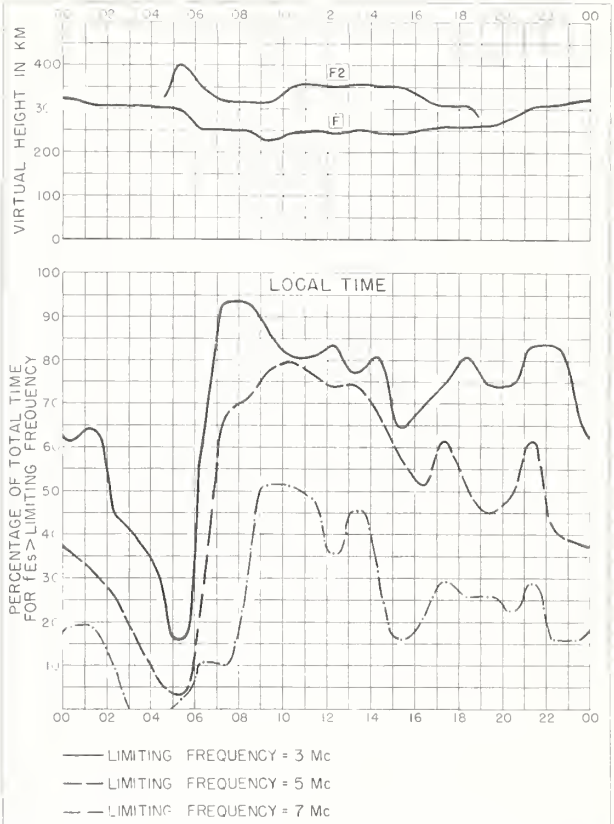


Fig. 112. TOKYO, JAPAN AUGUST 1959

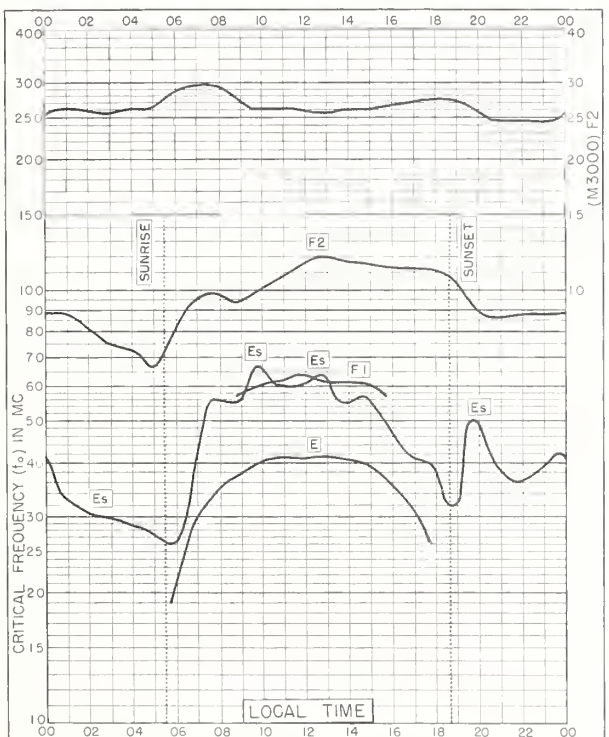


Fig. 113. YAMAGAWA, JAPAN
31.2°N, 130.6°E AUGUST 1959

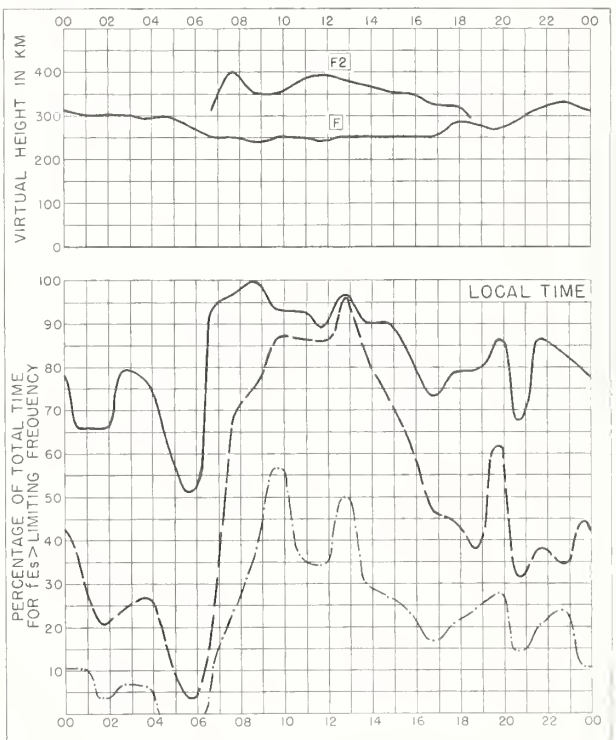


Fig. 114. YAMAGAWA, JAPAN AUGUST 1959

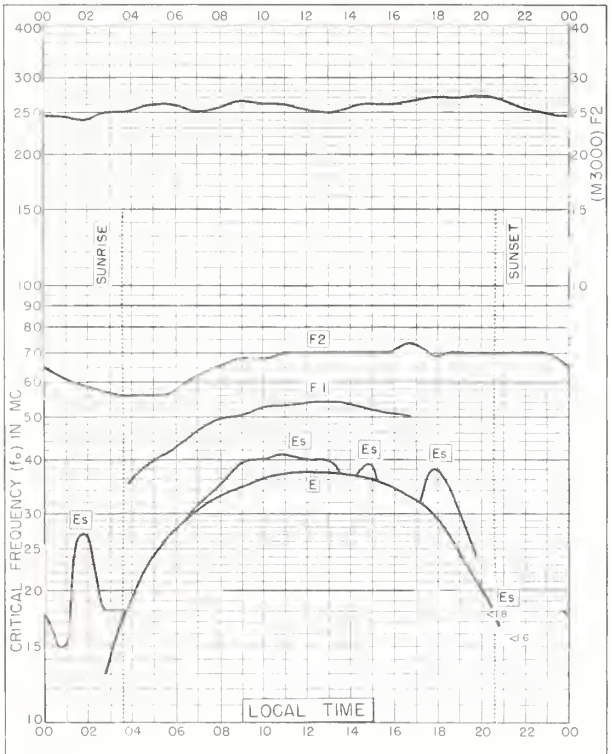


Fig. 115. INVERNESS, SCOTLAND
57.4°N, 4.2°W JULY 1959

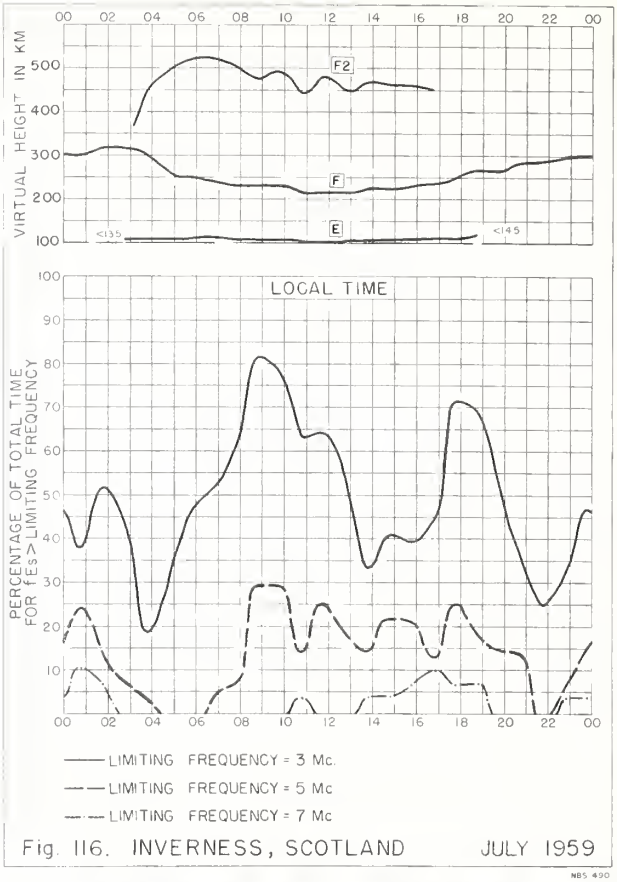


Fig. 116. INVERNESS, SCOTLAND JULY 1959

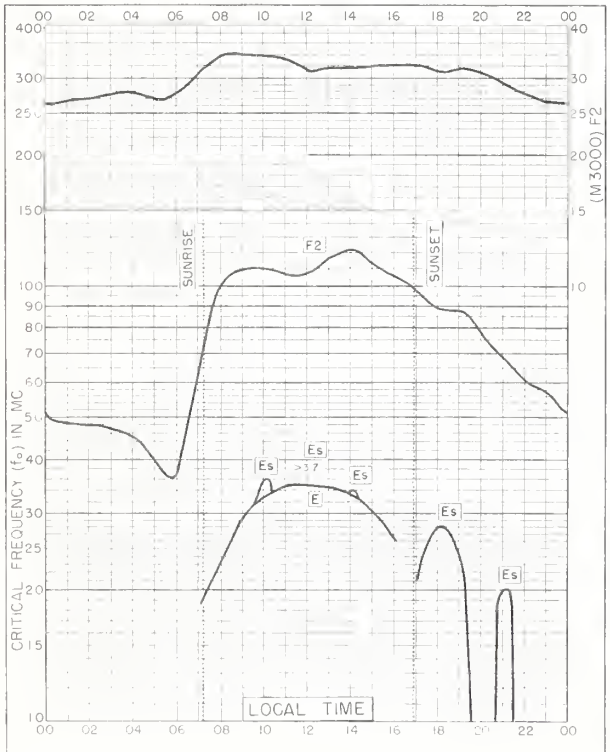


Fig. 117. CONCEPCION, CHILE
36.6°S, 73.0°W JULY 1959

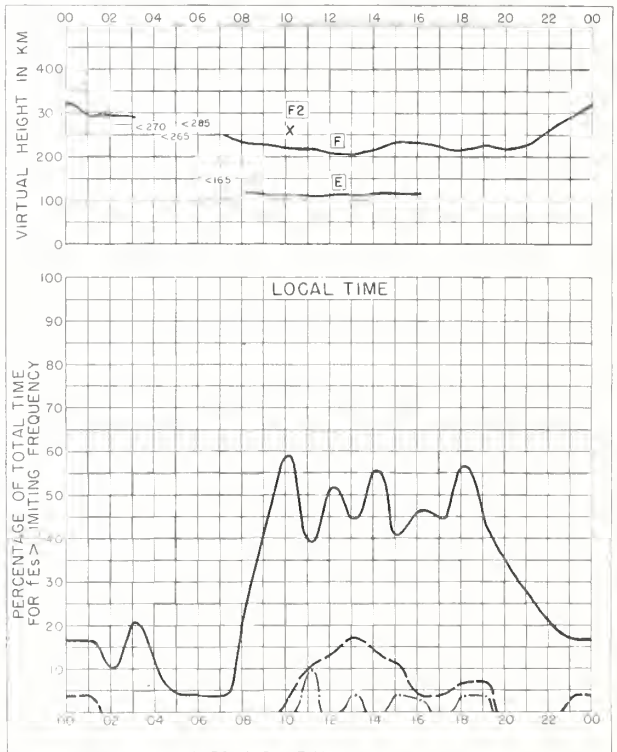


Fig. 118. CONCEPCION, CHILE JULY 1959

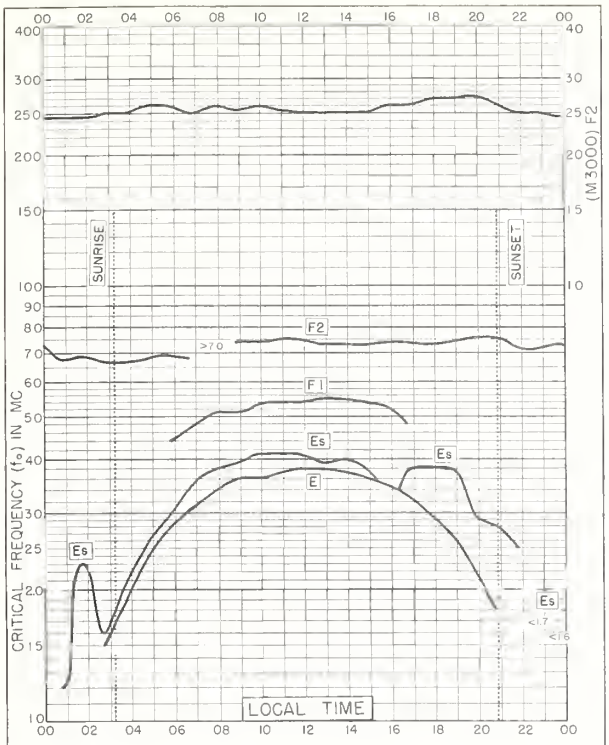


Fig. 119. INVERNESS, SCOTLAND
57.4°N, 4.2°W JUNE 1959

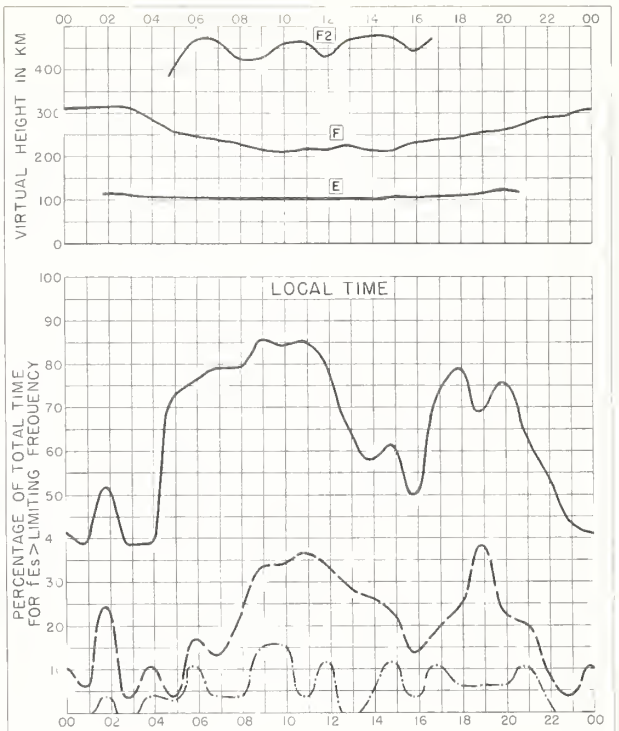


Fig. 120. INVERNESS, SCOTLAND JUNE 1959

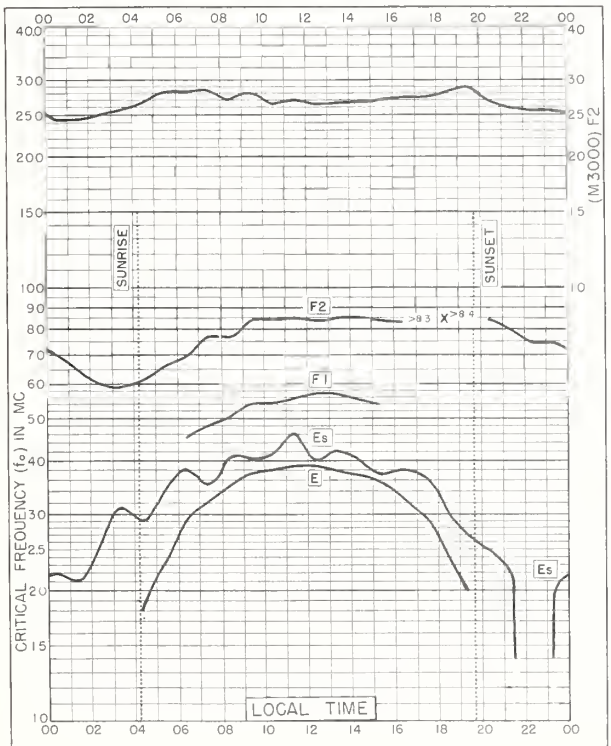


Fig. 121. De BILT, HOLLAND
52.1°N, 5.2°E MAY 1959

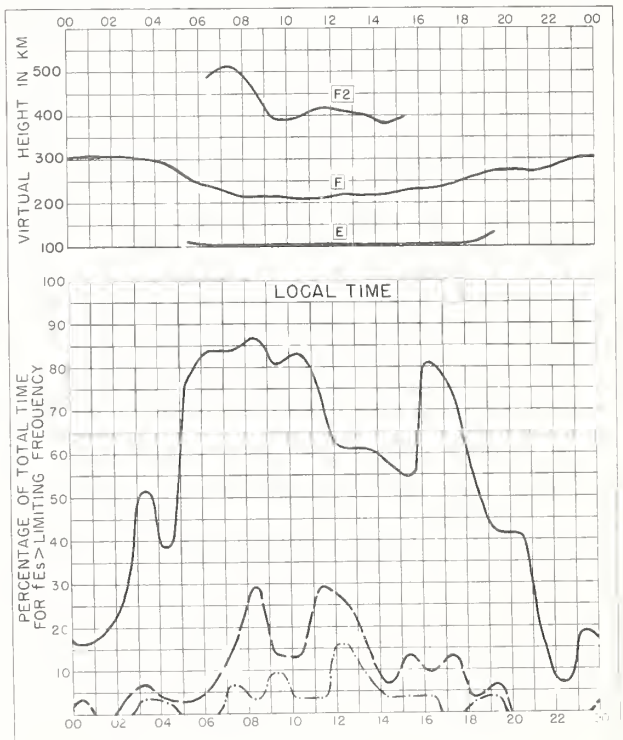


Fig. 122. De BILT, HOLLAND MAY 1959

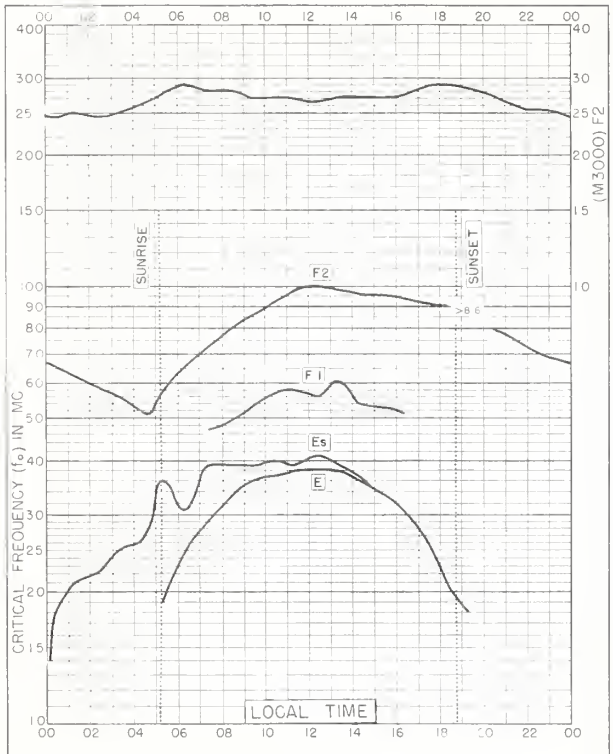


Fig. 123. De BILT, HOLLAND
52.1°N, 5.2°E APRIL 1959

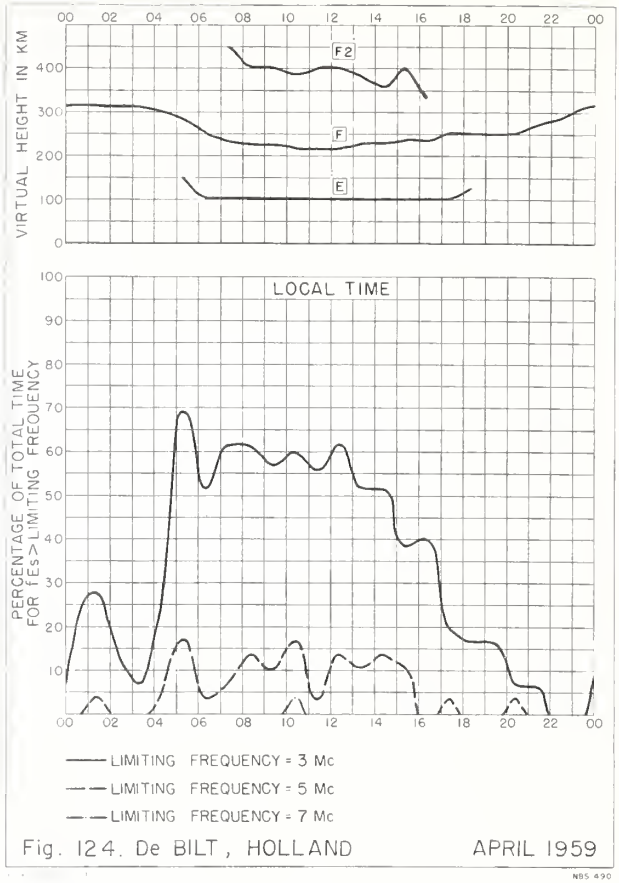


Fig. 124. De BILT, HOLLAND APRIL 1959

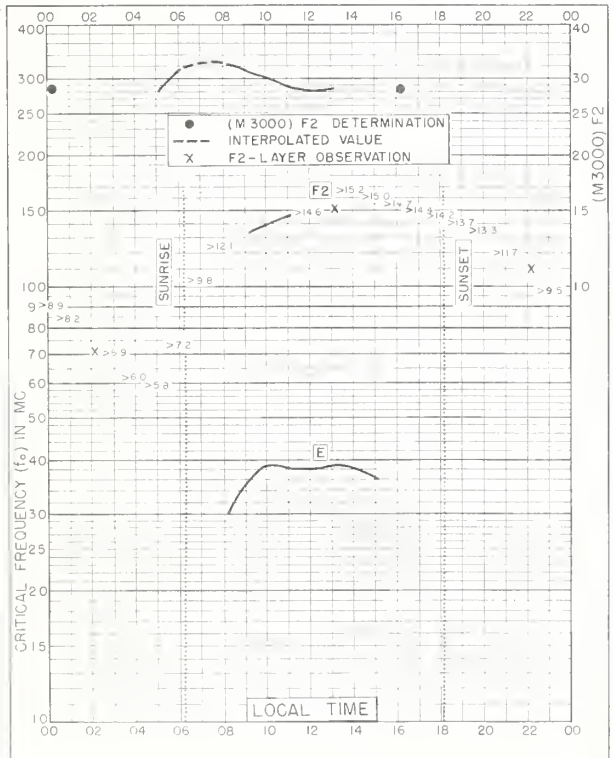


Fig. 125. DELHI, INDIA
28.6°N, 77.2°E MARCH 1959

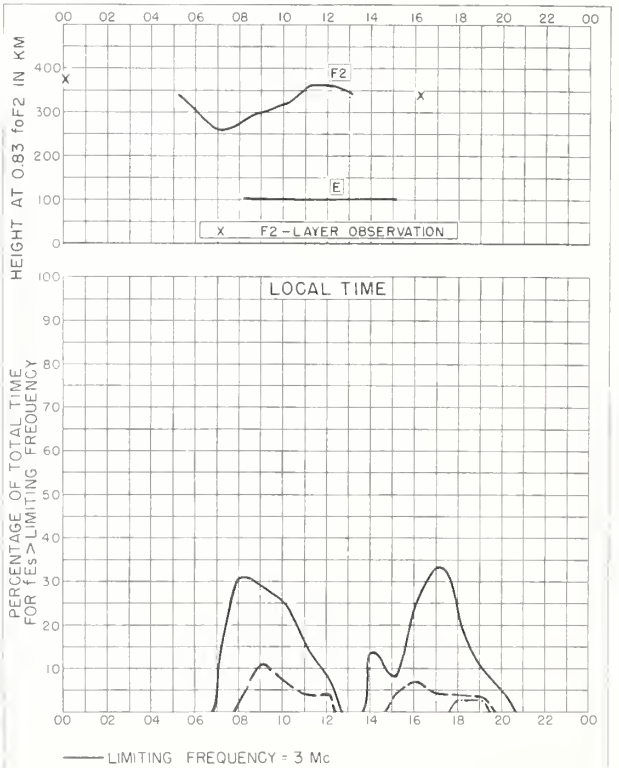


Fig. 126. DELHI, INDIA MARCH 1959

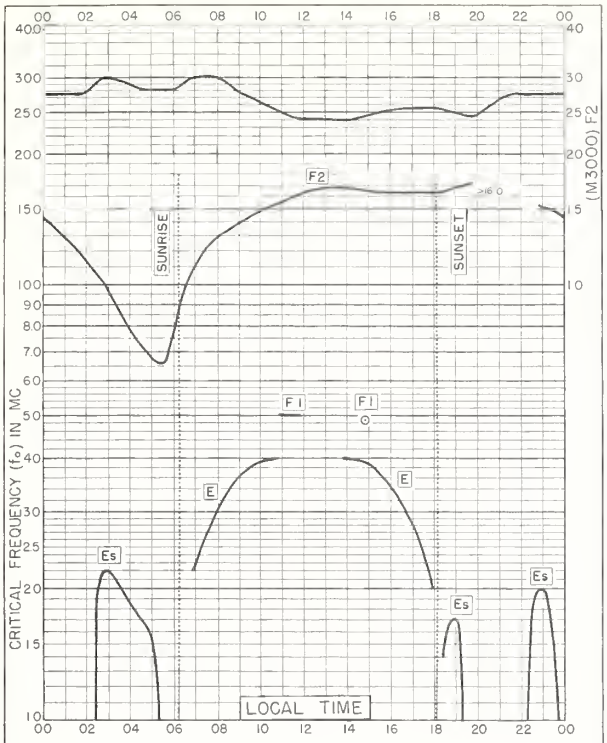


Fig. 127. AHMEDABAD, INDIA
23.0°N, 72.6°E MARCH 1959

NBS 503

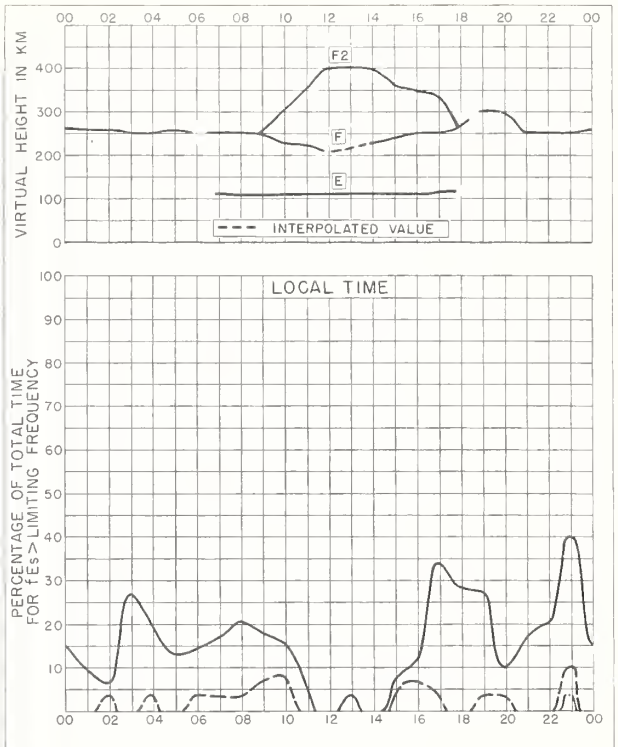


Fig. 128. AHMEDABAD, INDIA MARCH 1959

NBS 490

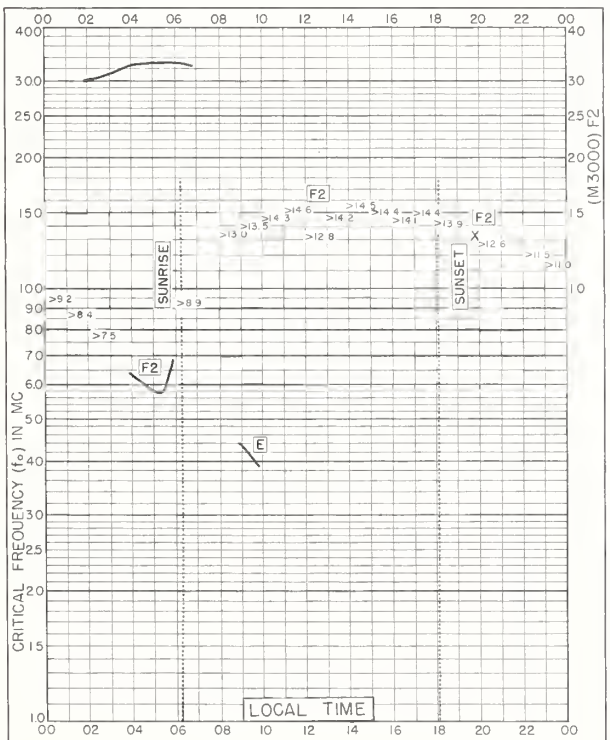


Fig. 129. BOMBAY, INDIA
19.0°N, 72.8°E MARCH 1959

NBS 503

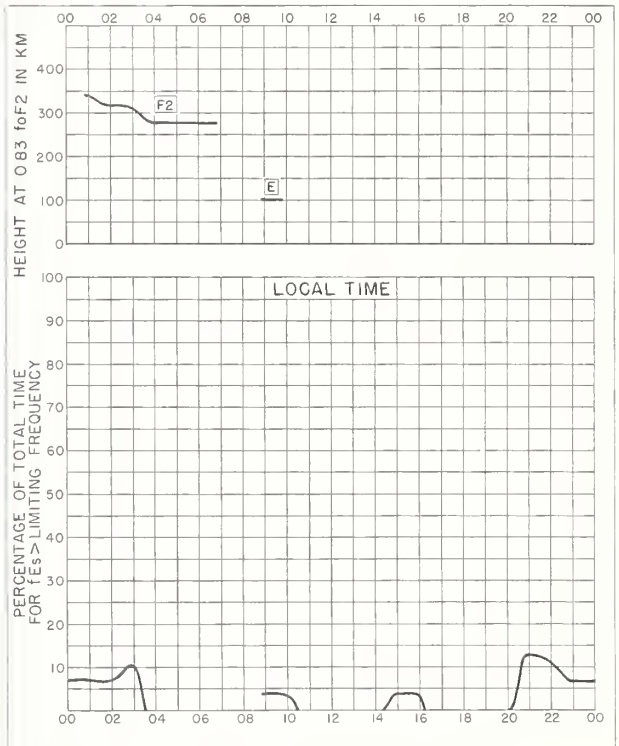


Fig. 130. BOMBAY, INDIA MARCH 1959

NBS 490

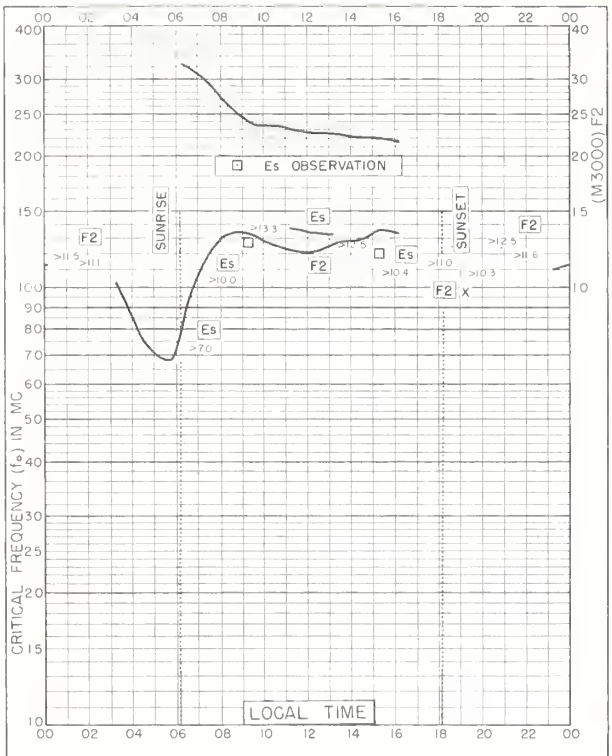


Fig. 131. TIRUCHY, INDIA
10.8°N, 78.7°E MARCH 1959

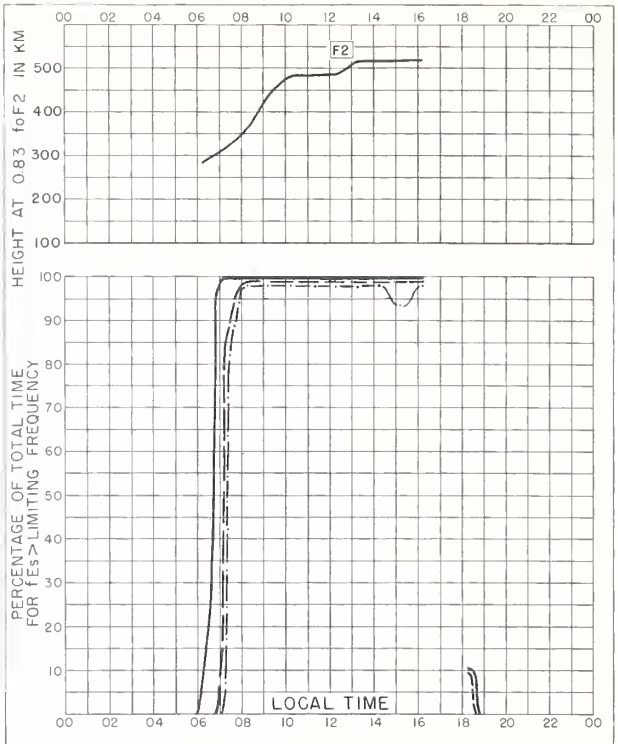


Fig. 132. TIRUCHY, INDIA MARCH 1959

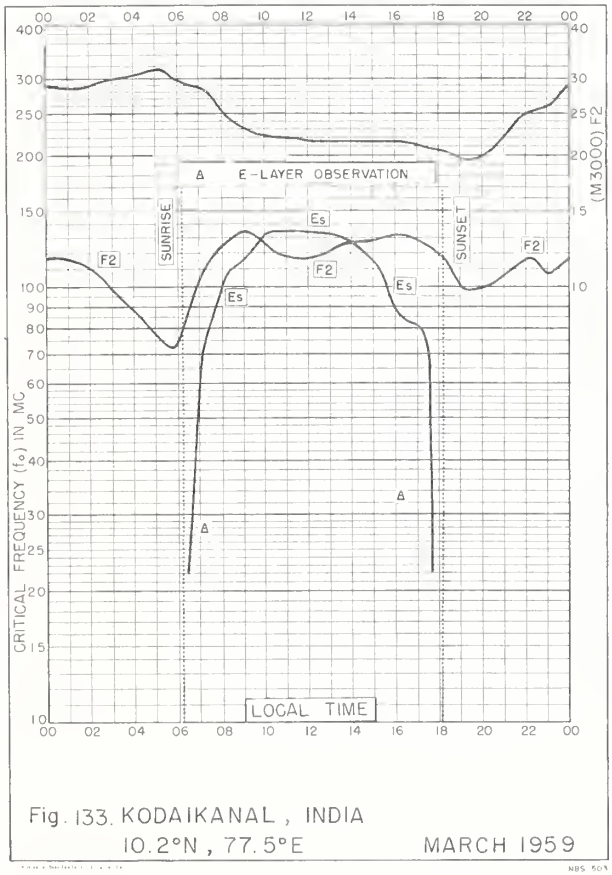


Fig. 133. KODAIKANAL, INDIA
10.2°N, 77.5°E MARCH 1959

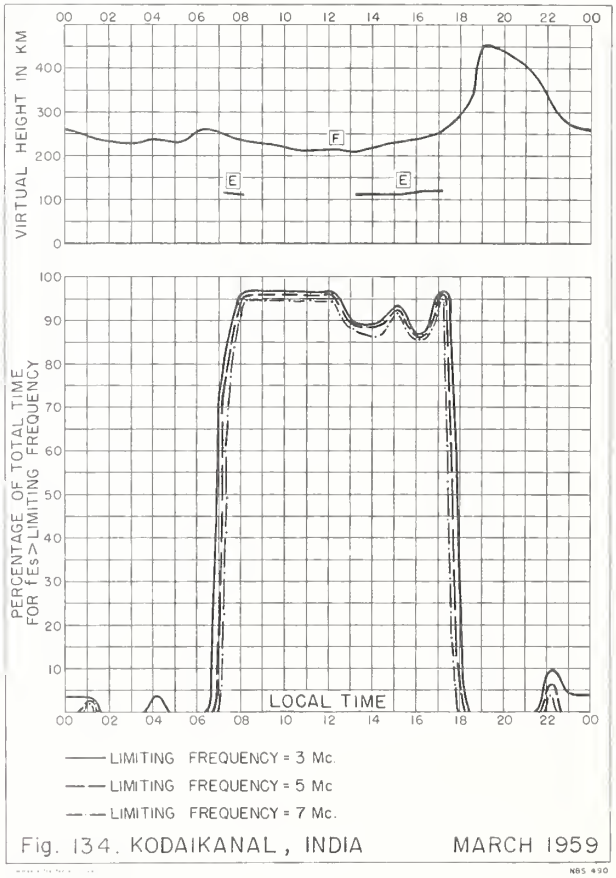


Fig. 134. KODAIKANAL, INDIA MARCH 1959

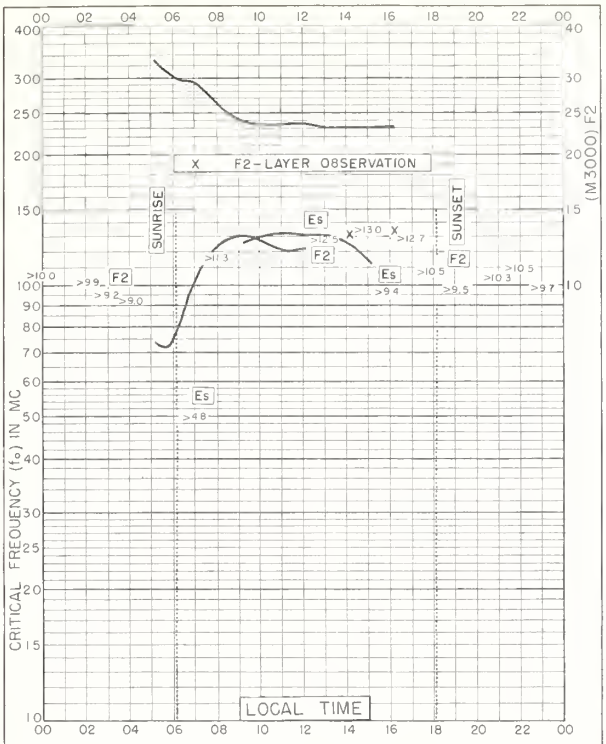


Fig. 135. TRIVANDRUM, INDIA
8.5°N, 77.0°E MARCH 1959

NBS 503

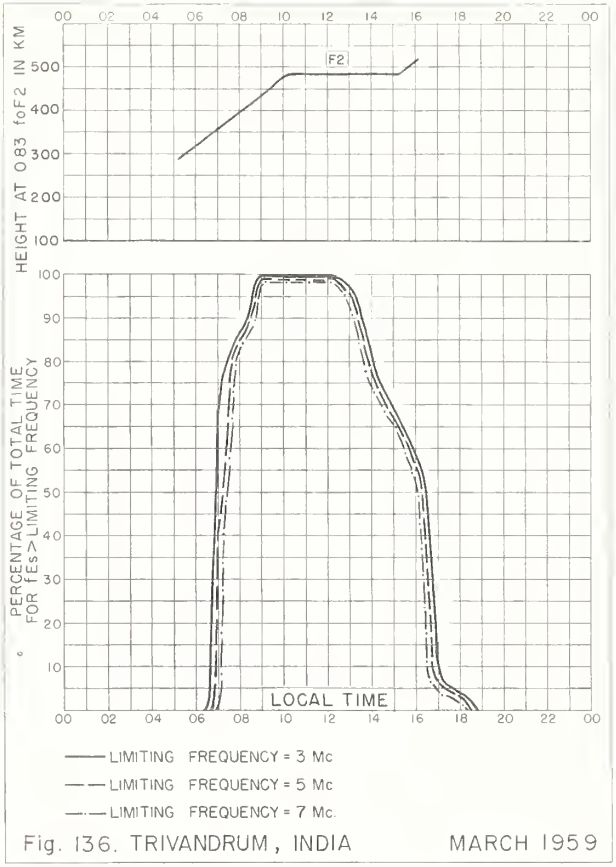


Fig. 136. TRIVANDRUM, INDIA MARCH 1959

NBS 490

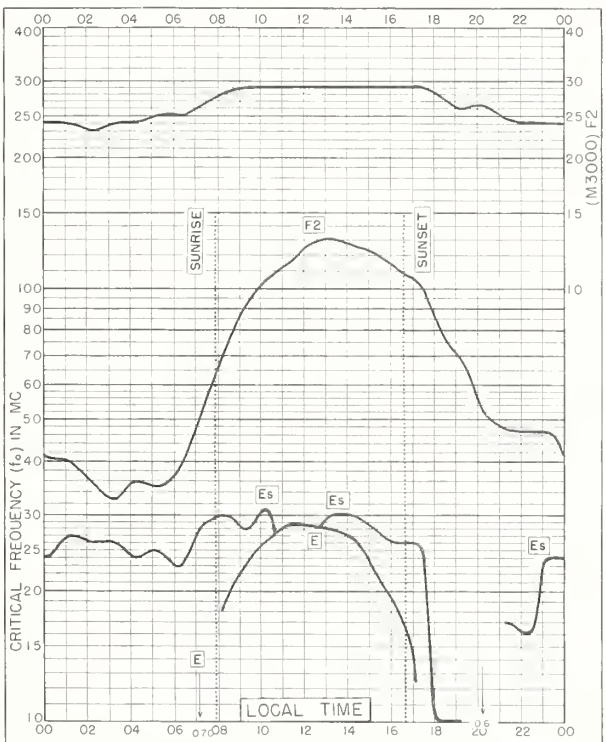


Fig. 137. UPSALA, SWEDEN
59.8°N, 17.6°E FEBRUARY 1959

NBS 503

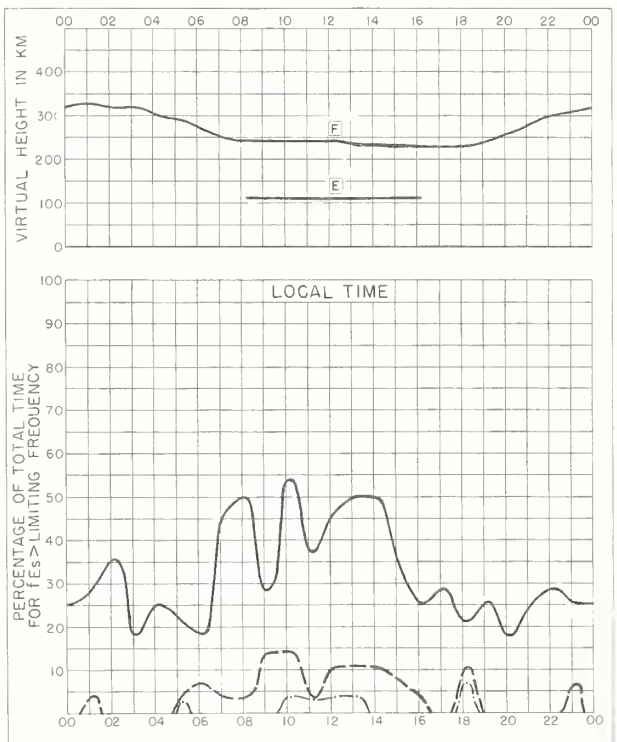


Fig. 138. UPSALA, SWEDEN FEBRUARY 1959

NBS 490

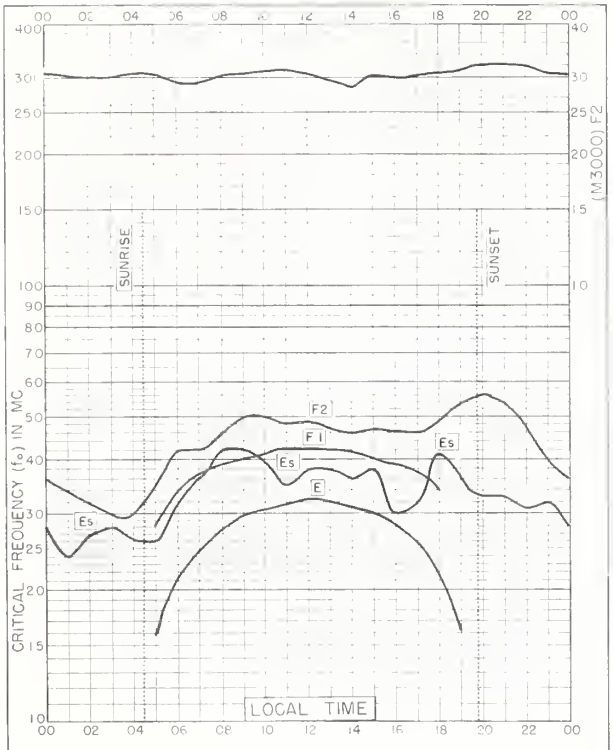


Fig. 139. FREIBURG, GERMANY
48.1°N, 7.8°E JULY 1954

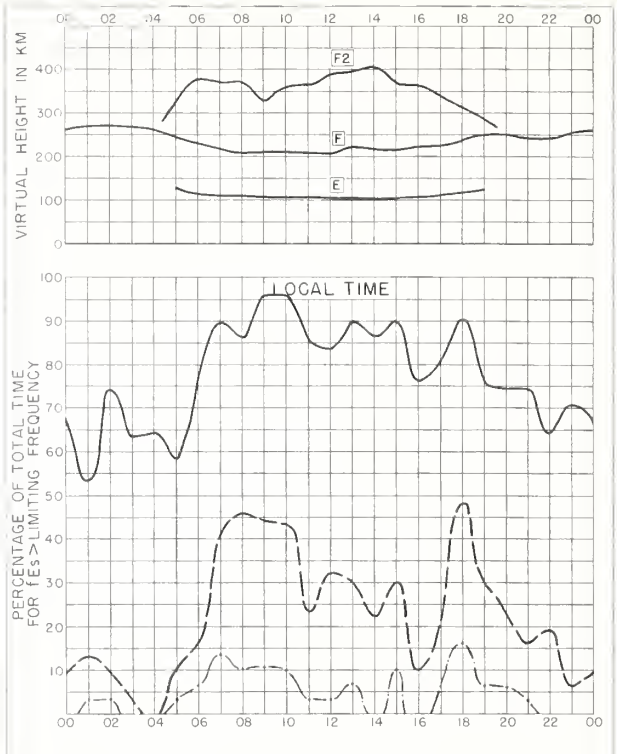


Fig 140. FREIBURG, GERMANY JULY 1954

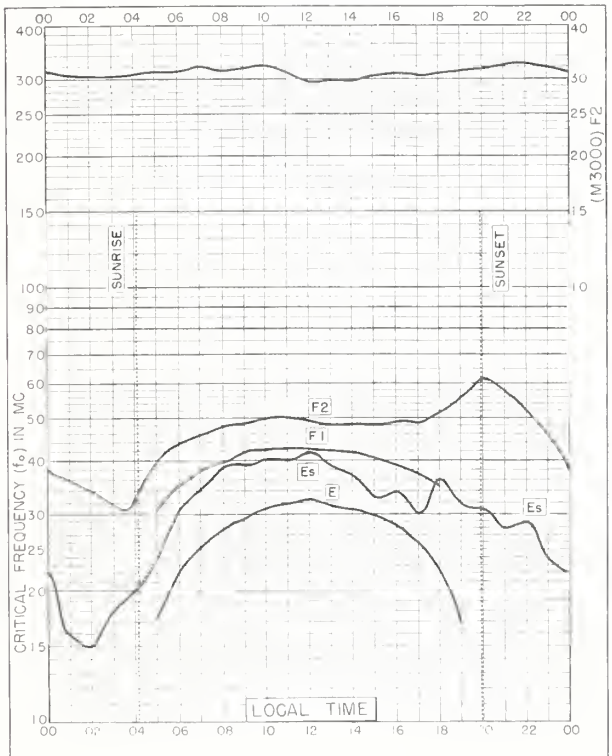


Fig. 141. FREIBURG, GERMANY
48.1°N, 7.8°E JUNE 1954

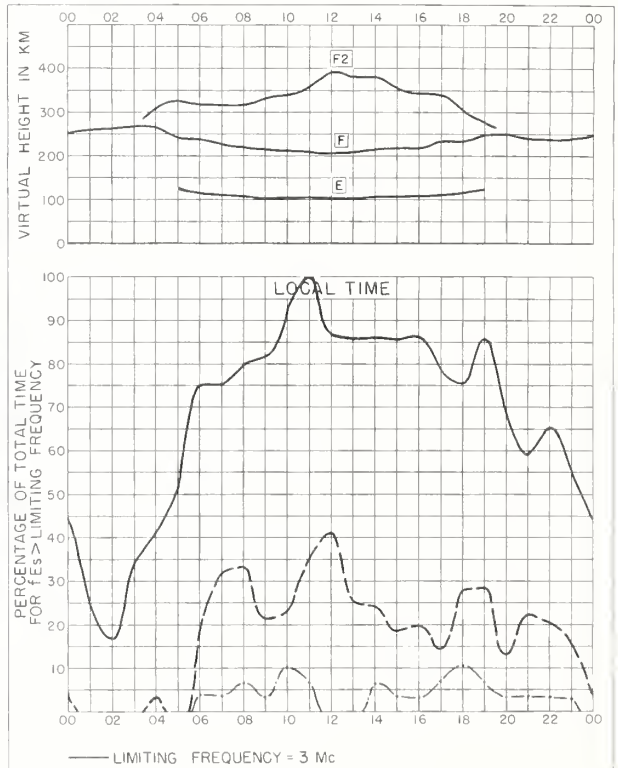


Fig. 142. FREIBURG, GERMANY JUNE 1954

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Index (CRPL-F210 (Part A), continued)

Index (CRPL-F210 (Part A), concluded)

# CRPL Reports

[A detailed list of CRPL publications is available from the Central Radio Propagation Laboratory upon request]

*Daily:*

Radio disturbance forecasts, every half hour from broadcast stations WWV and WWVH of the National Bureau of Standards.

Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

*Weekly:*

CRPL—J. North Atlantic Radio Propagation Forecast.

CRPL—Jp. North Pacific Radio Propagation Forecast.

*Semimonthly:*

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

*Monthly:*

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11—499—, monthly supplements to TM 11—499; Dept. of the Air Force, TO 31—3—28 series). On sale by Superintendent of Documents. Members of the Armed Forces should address cognizant military office.

CRPL—F. (Part A). Ionospheric Data.
(Part B). Solar-Geophysical Data.
Limited distribution. These publications are in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic, or other radio propagation data.

*Catalog of Data:*

A catalog of records and data on file at the U. S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

The publications listed above may be obtained without charge from the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder Laboratories, Boulder, Colorado, unless otherwise indicated. Please note that the F series is not generally available.

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*Circulars of the National Bureau of Standards pertaining to Radio Sky Wave Transmission:*

NBS Circular 462. Ionospheric Radio Propagation. $1.25.

NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions. 30 cents.

NBS Circular 557. Worldwide Radio Noise Levels Expected in the Frequency Band 10 Kilocycles to 100 megacycles. 30 cents.

NBS Circular 582. Worldwide Occurrence of Sporadic *E*. $3.25.

These Circulars are on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address the respective military office having cognizance of radio wave propagation.

*Selected Technical Notes of the National Bureau of Standards:*

NBS Tech. Note 2. PB151361. World Maps of F2 Critical Frequencies and Maximum Usable Frequency Factors. $3.50. PB151361-2. $3.50.

NBS Tech. Note 13. PB151372. Technical Considerations Leading to an Optimum Allocation of Radio Frequencies in the Band 25 to 60 Mc. $2.50.

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18-2. PB151377-2. Quarterly Radio Noise Data (Mar.-May 1959). $1.00.
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18-4. PB151377-4, etc. (Sept.-Nov. 1959). $1.50.

NBS Tech. Note 31. PB151390. An Atlas of Oblique-Incidence Ionograms. $2.25.

NBS Tech. Note 40-1. PB151399-1. Mean Electron Density Variations of the Quiet Ionosphere, 1: March 1959. $1.25.
40-2. PB151399-2, etc. 2: April 1959. $1.25.

NBS Tech. Note 117. PB161618. Variations in Frequency of Occurrence of Sporadic E, 1949—1959. $0.75.

These Technical Notes are on sale by the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. Order by PB number.

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